

RESOURCE ALLOCATION REVIEW BOARD



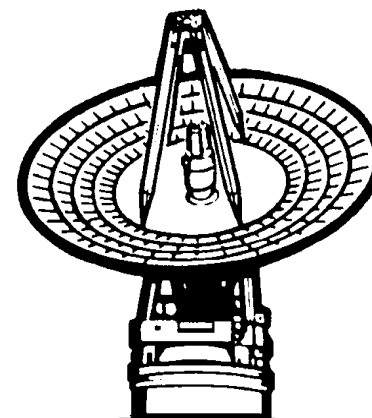
Resource Contention

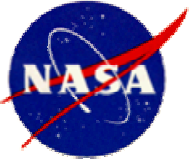
Version 2.0

2004 - 2013

Napoleon Lacey

August 12, 2003



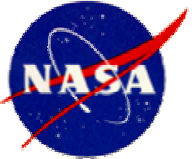


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Agenda

- ◆ Loading Study
- ◆ Periods of Contention
- ◆ Events, Recommendations and Analyses



RESOURCE ALLOCATION REVIEW BOARD



Loading Study

- ◆ Project Changes
- ◆ New and Deleted Projects
- ◆ Changes in DSN Resource Support Request
- ◆ DSN User / Mission Planning Set
 - Ongoing / Approved Projects
 - Advanced / Planning Projects
- ◆ Major DSN Downtimes by Date
- ◆ IND Resource Implementation Planning Matrix



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Loading Study



Project Changes Since February 2003 RARB

◆ Deep Impact Flyby

- Launch date changed from 01/02/04 to 12/30/04

◆ GOES-N

- Launch date changed from 04/15/04 to not earlier than 12/01/04

◆ Gravity Probe-B

- End of prime mission changed from 01/01/05 to 05/30/05

◆ Hayabusa

- Name changed from MUSES-C

◆ Kepler

- End of prime mission changed from 07/31/11 to 09/26/11

◆ Mars Telecommunications Orbiter 2009

- Name changed from Mars Telesat 2009

◆ Mars Placeholder 2011

- Name changed from Mars CNES MSR Lander 2011

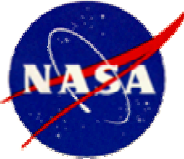


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Project Changes (continued)



- ◆ **Mars Placeholder 2013**
 - Name changed from Mars CNES MSR Orbiter 2013
- ◆ **Mission Enhancement by Ground-based Astronomy**
 - End of prime mission changed from 12/31/03 to 12/31/08
- ◆ **Opportunity**
 - Name changed from Mars Exploration Rover - B (1)
 - Launch date changed from 06/25/03 to 07/07/03
- ◆ **Phoenix**
 - Selected mission for Mars Competed Scout 2007.
- ◆ **Spirit**
 - Name changed from Mars Exploration Rover - A (2)
 - Launch date changed from 05/30/03 to 06/10/03
- ◆ **Space Infrared Telescope Facility**
 - Launch date changed from 04/15/03 to 08/23/03
 - End of prime mission changed from 07/24/08 to 10/12/08



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Project Changes (continued)



◆ Ulysses

- End of extended mission changed from 09/30/04 to 12/31/06 (subject to funding)
- Supported on best efforts basis

◆ Wilkinson Microwave Anisotropy Probe

- Name changed from Microwave Anisotropy Probe

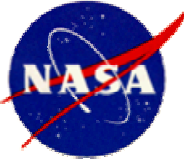


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New Projects Since February 2003 RARB

Project	Acronym	Launch or Start	EOPM	EOEM
James Webb Space Telescope	JWST	08/01/11	07/31/16	TBD
Rosetta	ROSE	02/26/04	12/31/15	- - -
Space Interferometry Mission	SIM	12/31/09	06/30/20	TBD

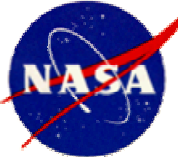


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Deleted Projects Since February 2003 RARB

Project	Acronym	Launch or Start	EOPM	EOEM
Pioneer 10 ACS	PN10	03/03/72	07/01/97	10/01/04
SELENE	SELE	07/23/05	09/30/06	- - -

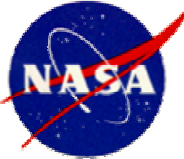


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JPL Changes in DSN Resource Support since February 2003 RARB

- ◆ **All Setup and Teardown times have been restored to pre-NSP times.**
- ◆ **Deep Impact Flyby**
 - Reduced mission duration by one year
 - Added Delta DOR and TCM requirements in 2005
- ◆ **Kepler**
 - Changed launch support in weeks 40 and 41, 2007 from 12 to 24 hours per day
- ◆ **Mars Global Surveyor**
 - MSPA support changed to standalone support in weeks 45 - 52, 2006
- ◆ **Mars Odyssey**
 - MSPA support changed to standalone support in weeks 49 - 52, 2006
- ◆ **Mars Reconnaissance Orbiter**
 - MSPA support changed to standalone support in weeks 45 - 52, 2006



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Changes in DSN Resource Support (continued)

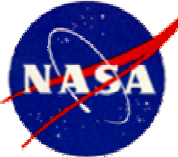


◆ STEREO Ahead

- Added new request for back-up support for initial acquisition and first maneuver support in week 46, 2005

◆ Voyager 2

- Added ASCAL and MAGROL events in 2005 - 2007



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DSN User / Mission Planning Set

– Ongoing / Approved Projects –

Project	Acronym	Launch or Start	EOPM	EOEM
DSN Antenna Calibration	DSN	--	--	--
DSS Maintenance	DSS	--	--	--
European VLBI Network	EVN	--	--	--
Ground Based Radio Astronomy	GBRA	--	--	--
Reference Frame Calibration	DSN	--	--	--
Space Geodesy	SGP	--	--	--
Voyager 2	VGR2	08/20/77	10/15/89	09/30/07
Voyager 1	VGR1	09/05/77	12/31/80	09/30/07
Goldstone Solar System Radar	GSSR	04/01/85	--	--
Galileo	GLLO	10/18/89	12/07/97	09/21/03
Ulysses	ULYS	10/06/90	09/11/95	12/31/06
ISTP - Geotail	GTL	07/24/92	07/24/95	09/30/07
ISTP - Wind	WIND	11/01/94	11/01/97	09/30/07
ISTP - SOHO	SOHO	12/02/95	05/02/98	09/30/07
ISTP - Polar	POLR	02/22/96	08/23/97	09/30/07
Gravity Probe B	GPB	06/01/96	05/30/05	TBD
Mars Global Surveyor	MGS	11/07/96	02/01/01	01/03/08



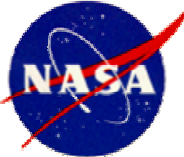
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DSN User / Mission Planning Set

– Ongoing / Approved Projects (continued) –

Project	Acronym	Launch or Start	EOPM	EOEM
Advance Composition Explorer	ACE	08/25/97	02/01/01	09/30/07
Cassini	CAS	10/15/97	06/30/08	06/30/10
Nozomi (Planet-B)	NOZO	07/03/98	12/31/05	TBD
Stardust	SDU	02/07/99	01/14/06	- - -
Chandra X-ray Observatory	CHDR	07/23/99	07/24/09	07/24/14
Imager for Magnetopause-to-Aurora Global Exploration	IMAG	03/25/00	05/30/02	09/30/07
Cluster 2 - S/C #2 (Samba)	CLU2	07/16/00	02/15/03	09/30/07
Cluster 2 - S/C #3 (Rumba)	CLU3	07/16/00	02/15/03	09/30/07
Cluster 2 - S/C #1 (Salsa)	CLU1	08/09/00	02/15/03	09/30/07
Cluster 2 - S/C #4 (Tango)	CLU4	08/09/00	02/15/03	09/30/07
2001 Mars Odyssey	M01O	04/07/01	08/24/04	05/29/08
Wilkinson Microwave Anisotropy Probe	WMAP	06/30/01	10/01/03	10/01/06
Genesis	GNS	08/08/01	09/08/04	- - -
Mission Enhancement by Ground-based Astronomy	MEGA	02/01/02	12/31/08	- - -
International Gamma Ray Astrophysics Lab	INTG	10/17/02	12/18/04	12/18/07
Hayabusa (MUSES - C)	MUSC	05/09/03	06/05/07	- - -
Mars Express Orbiter	MEX	06/02/03	02/11/06	08/03/08



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DSN User / Mission Planning Set

– Ongoing / Approved Projects (continued) –

Project	Acronym	Launch or Start	EOPM	EOEM
Spirit (Mars Exploration Rover - A)	MER2	06/10/03	04/06/04	05/11/04
Opportunity (Mars Exploration Rover - B)	MER1	07/07/03	04/27/04	06/15/04
Space Infrared Telescope Facility	STF	08/23/03	10/12/08	---
Rosetta	ROSE	02/26/04	12/31/15	---
Messenger	MSGR	03/10/04	04/06/10	---
Lunar - A	LUNA	08/14/04	04/11/05	---
Space Technology 5	ST5	11/19/04	02/27/05	TBD
Deep Impact Flyby	DIF	12/30/04	08/05/05	---
RadioAstron	RADA	03/15/05	06/15/10	TBD
Mars Reconnaissance Orbiter	MRO	08/10/05	12/31/10	12/31/15
Stereo Ahead	STA	11/15/05	02/15/08	---
Stereo Behind	STB	11/15/05	02/15/08	---



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DSN User / Mission Planning Set

– Advanced / Planning Projects –

Project	Acronym	Launch or Start	EOPM	EOEM
New Horizons	NHPC	01/10/06	03/18/17	TBD
Dawn	DAWN	05/27/06	07/26/15	TBD
Phoenix Scout	M07S	08/09/07	11/05/08	TBD
Kepler	KPLR	10/01/07	09/26/11	TBD
Mars Telecommunications Orbiter 2009	M09T	09/07/09	09/07/16	09/07/20
Mars Science Laboratory 2009	M09L	10/25/09	03/04/12	TBD
James Webb Space Telescope	JWST	08/01/11	07/31/16	TBD
Advanced Radio Interferometry between Space and Earth (ARISE)	ARSE	06/15/10	06/15/15	- - -
VLBI Space Observatory Programme (VSOP-2)	VSP2	06/15/10	06/15/15	- - -
Space Interferometry Mission	SIM	12/31/09	06/30/20	TBD
Mars Placeholder 2011	M11S	10/30/11	09/10/14	TBD
Mars Placeholder 2013	M13O	11/28/13	08/21/16	TBD



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DSN Major Downtimes by Date

– 2004 –

Site	Description	Start	End	Duration (days)	Week(s)	Start DOY	End DOY
DSS 46	Servo Drive Replacement	04/12/2004	05/23/2004	42	16 – 21	103	144
DSS 15	Antenna Controller Replacement	04/12/2004	06/13/2004	63	16 – 24	103	165
DSS 43	Antenna Rebalancing (Proposal)	06/14/2004	06/27/2004	14	25 – 26	176	179
DSS 14	Antenna Controller Replacement	07/07/2004	10/03/2004	89	28 – 40	189	277
DSS 45	Life Extension (Proposed)	08/09/2004	12/05/2004	119	33 – 49	222	340
DSS 14	Hydrostatic Bearing	09/20/2004	11/21/2004	63	39 – 47	264	326
DSS 14	NIB – USC Installation	09/20/2004	10/03/2004	14	39 – 40	264	277
DSS 14	Antenna Controller Replacement / Hydrostatic Bearing Replacement (Proposed Extension)	11/22/2004	12/05/2004	14	48 – 49	327	340
DSS 45	NIB – USC Installation	11/22/2004	12/05/2004	14	48 – 49	327	340

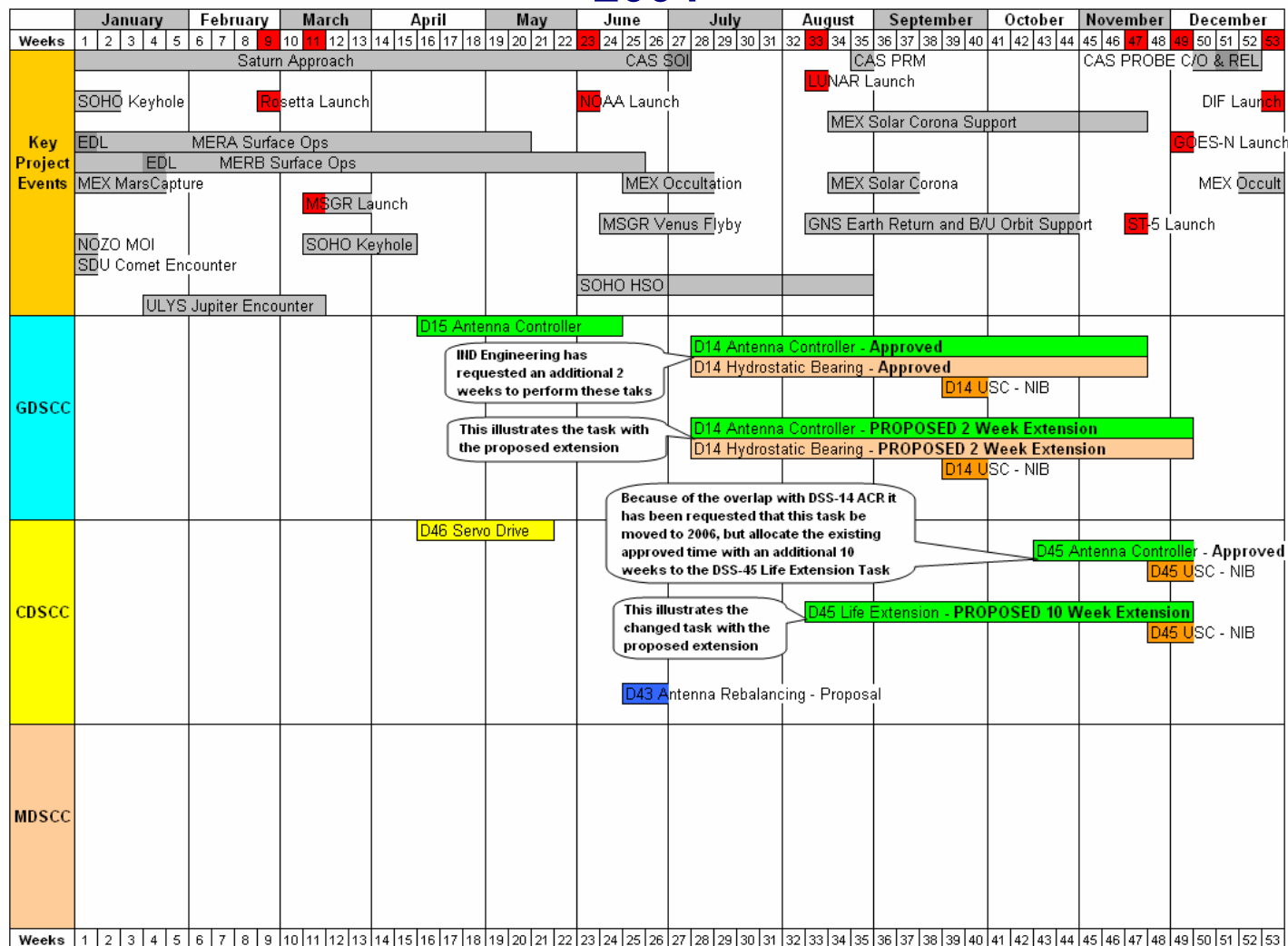


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DSN Major Downtimes by Date

– 2004 –





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DSN Major Downtimes by Date

– 2005 –

Site	Description	Start	End	Duration (days)	Week(s)	Start DOY	End DOY
DSS 27	NSP Upgrade (Proposed)	01/03/2005	01/30/2005	28	01 – 04	003	030
DSS 27	USC Installation (Approved NIB)	01/10/2005	01/23/2005	14	02 – 03	010	023
DSS 63	USC Installation (Proposed)	01/17/2005	01/30/2005	14	03 – 04	017	030
DSS 26	USC Installation	01/24/2005	02/06/2005	14	04 – 05	024	037
DSS 65	Antenna Controller Replacement / Relocation / Life Extension (Proposed)	01/31/2005	05/29/2005	119	05 – 21	031	149
DSS 25	USC Installation	02/21/2005	03/06/2005	14	08 – 09	052	065
DSS 65	Antenna Controller Replacement	02/21/2005	04/10/2005	49	08 – 14	052	100
DSS 65	NIB – USC Installation	02/21/2005	02/27/2005	7	08	052	058
DSS 54	USC Installation	04/11/2005	04/17/2005	7	15	101	107
DSS 15	USC Installation	04/11/2005	04/24/2005	14	15 – 16	101	114
DSS 55	USC Installation	04/25/2005	05/01/2005	7	17	115	121
DSS 34	X/X–Ka Band	05/02/2005	06/26/2005	56	18 – 25	122	177
DSS 34	NIB – USC Installation	05/02/2005	05/15/2005	14	18 – 19	122	135
DSS 24	USC Installation	06/27/2005	07/03/2005	7	26	178	184



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DSN Major Downtimes by Date



– 2005 (continued) –

Site	Description	Start	End	Duration (days)	Week(s)	Start DOY	End DOY
DSS 43	Antenna Controller Replacement / Hydrostatic Bearing Replacement (Proposed)	07/18/2005	01/01/2006	168	29 – 52	199	001
DSS 43	Antenna Controller Replacement	07/25/2005	09/11/2005	49	30 – 36	206	254
DSS 43	NIB – USC Installation	07/25/2005	08/07/2005	14	30 – 31	206	219

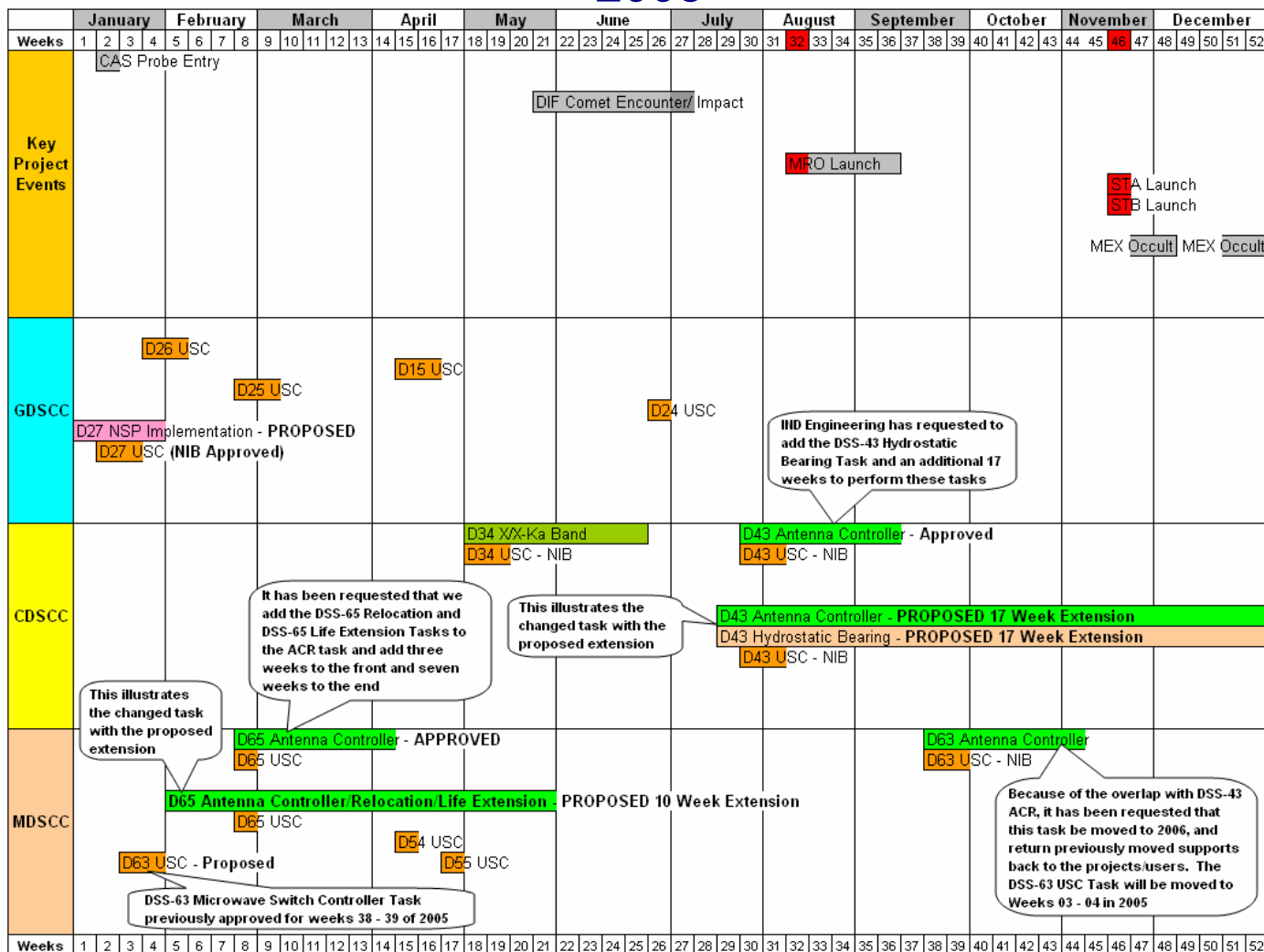


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DSN Major Downtimes by Date

– 2005 –





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DSN Major Downtimes by Date

– 2006 –

Site	Description	Start	End	Duration (days)	Week(s)	Start DOY	End DOY
DSS 63	Antenna Controller Replacement (Proposed)	05/22/2006	09/03/2006	112	21 – 35	142	246
DSS 24	X/X–Ka Band	09/04/2006	10/22/2006	49	36 – 42	247	295
DSS 45	Antenna Controller Replacement (Proposed)	10/30/2006	12/31/2006	63	44 – 52	303	365

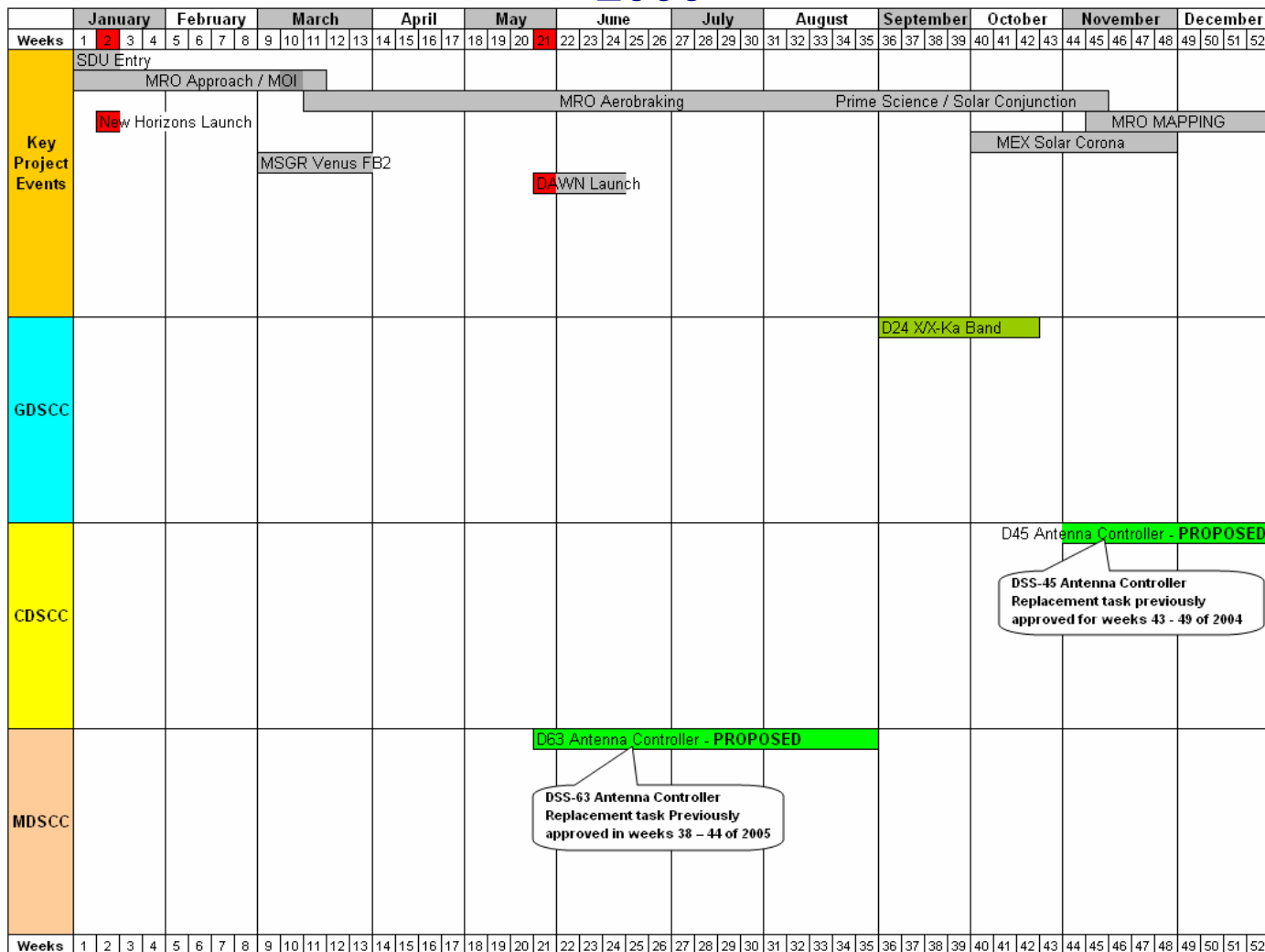


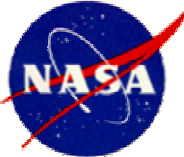
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DSN Major Downtimes by Date

– 2006 –





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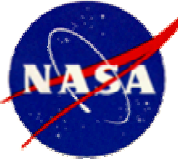
IND Resource Implementation Planning Matrix

Station	Subnet	Delivery Date	S-Band Down	S-Band Up	X-Band Down	X-Band Up	20 kW X-Band	Ka-Band Down	Ka-Band Up	NSP
DSS-14	70M	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	TBD	N/A	XXXX
DSS-15	34HEF	XXXX	XXXX	N/A	XXXX	XXXX	XXXX	TBD	N/A	XXXX
DSS-16	26M	XXXX	XXXX	XXXX	N/A	N/A	N/A	N/A	N/A	N/A
DSS-24	34BWG1	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	10/01/05	N/A	XXXX
DSS-25	34BWG2	XXXX	N/A	N/A	XXXX	XXXX	09/01/03	XXXX	XXXX	XXXX
DSS-26	34BWG2	XXXX	N/A	N/A	XXXX	XXXX	XXXX	XXXX	N/A	XXXX
DSS-27	34HSB	XXXX	XXXX	XXXX	N/A	N/A	N/A	N/A	N/A	TBD
DSS-34	34BWG1	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	06/27/05	N/A	XXXX
DSS-43	70M	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	TBD	N/A	XXXX
DSS-45	34HEF	XXXX	XXXX	N/A	XXXX	XXXX	XXXX	TBD	N/A	XXXX
DSS-46	26M	XXXX	XXXX	XXXX	N/A	N/A	N/A	N/A	N/A	N/A
DSS-54	34BWG1	XXXX	XXXX	XXXX	XXXX	XXXX	09/08/03	08/01/06	N/A	XXXX
DSS-55	34BWG2	11/01/03	N/A	N/A	11/01/03	11/01/03	11/01/03	11/01/03	N/A	11/01/03
DSS-63	70M	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	TBD	N/A	XXXX
DSS-65	34HEF	XXXX	XXXX	N/A	XXXX	XXXX	XXXX	TBD	N/A	XXXX
DSS-66	26M	XXXX	XXXX	XXXX	N/A	N/A	N/A	N/A	N/A	N/A

XXXX = Capability Currently Exists

N/A = Capability Not Planned

07/16/03



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Periods of Contention



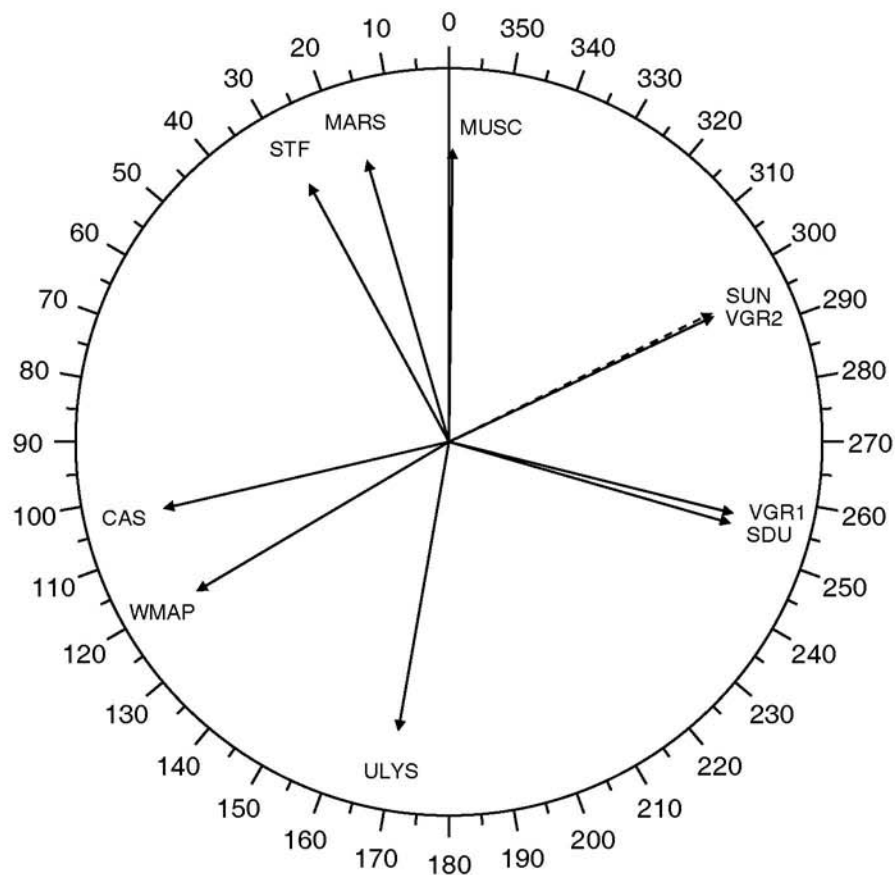
Month	Weeks		
	2004	2005	2006
January		01 – 04	01 – 04
February		05 – 08	05 – 08
March		09 – 13	09 – 13
April		14 – 17	14 – 17
May	19 – 22	18 – 21	18 – 21
June	23 – 26	22 – 26	22 – 26
July	27 – 31	27 – 30	27 – 30
August	32 – 35	31 – 34	31 – 35
September	36 – 40	35 – 39	36 – 39
October	41 – 44	40 – 43	40 – 43
November	45 – 48	44 – 47	44 – 48
December	49 – 53	48 – 52	49 – 52

**JPL**

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Spacecraft Right Ascension

January 15, 2004



THE SPACECRAFT RIGHT ASCENSION FIGURES SHOW THE POSITIONS OF THE SPACECRAFT IN THE SKY RELATIVE TO EACH OTHER ON THE 15TH OF EACH MONTH FOR THE YEAR INDICATED. RIGHT ASCENSION IS COMMONLY MEASURED IN HOURS, WITH 1 HOUR = 15 DEGREES.

THE ARROW INDICATES THE CENTER OF A SPACECRAFT VIEW FROM EARTH. EXTEND 60 DEGREES ON BOTH SIDES OF THE ARROW TO CALCULATE AN EIGHT (8) HOUR VIEW PERIOD.



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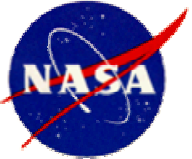
Events, Recommendations and Analyses



- ◆ The RARB Redbook makes reference to monthly contention as low, moderate, severe, and extreme. The explanation of these terms is listed below.
 - Projected unsupportable time is expressed as low, moderate, severe, or extreme in the Analysis sections of this document. Projected unsupportable time is an estimate of the amount of requested time, typically in percentage of requirements or modified requirements, that is unsupportable, based on resource availability, other users' requirements, assumed priorities, and viewperiods. The following percentages apply:

Low:	$0\% \leq x < 15\%$
Moderate:	$15\% \leq x < 30\%$
Severe:	$30\% \leq x < 45\%$
Extreme:	$45\% \leq x$

Workable is a term used to express a condition wherein the projected unsupportable time is low. This condition occurs when the general forecasting analysis indicates a low percentage of unsupportable time or when RARB agreements have been made to reduce contention to a workable level. Workable essentially means that experience has shown that the remaining contention may be solved during final schedule preparations and negotiations.

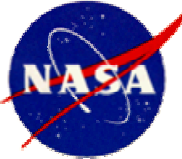


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Events, Recommendations and Analyses



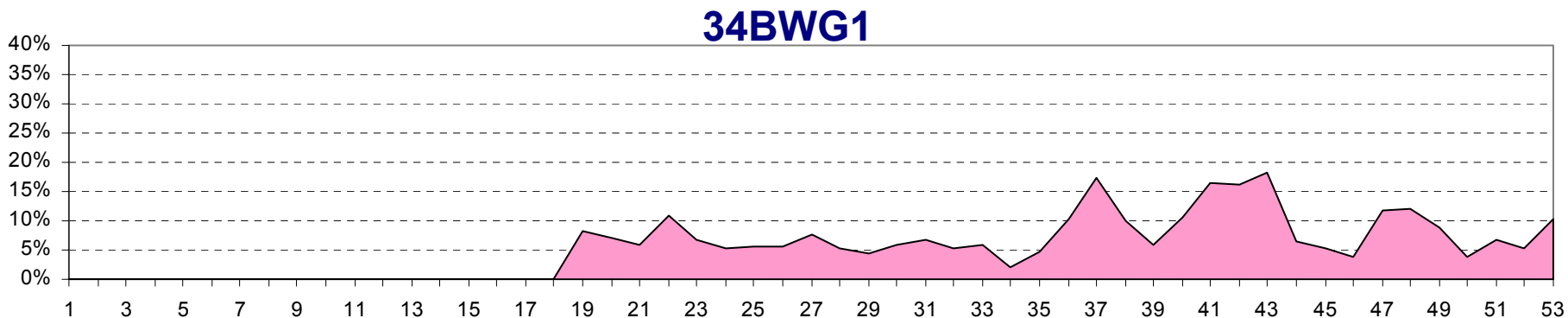
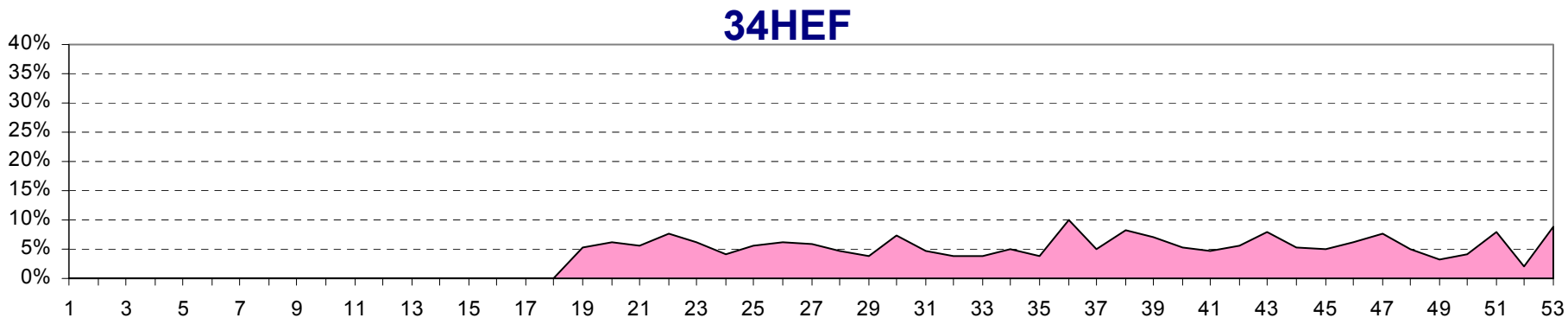
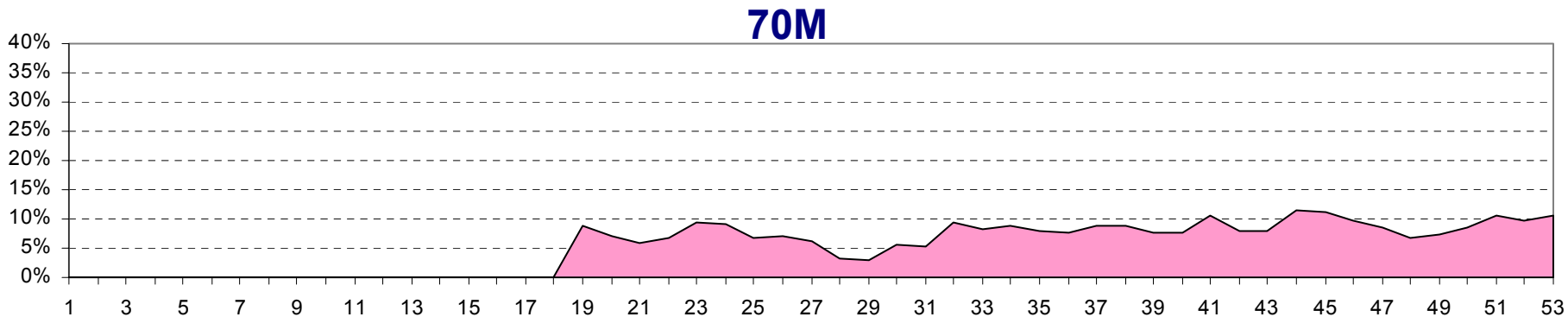
2004 Events, Recommendations and Analyses



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Events, Recommendations and Analyses

2004 Weekly Average User Unsupportable Time





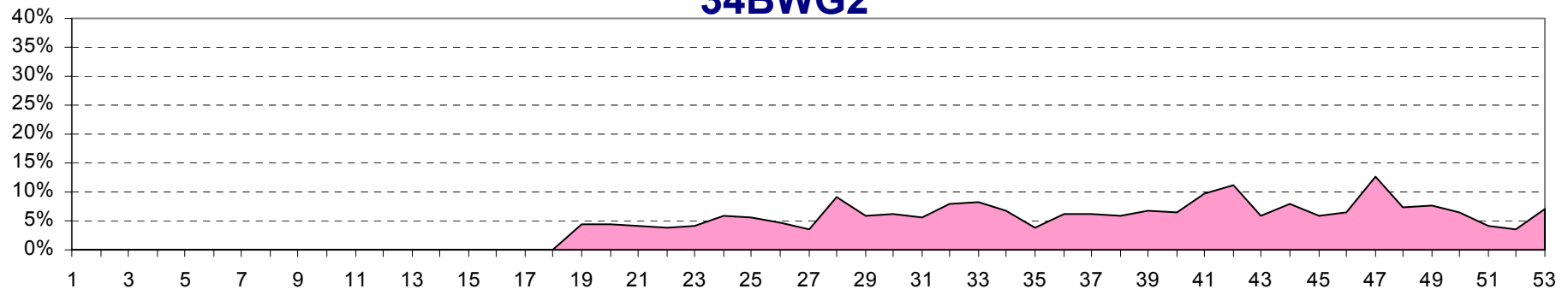
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Events, Recommendations and Analyses

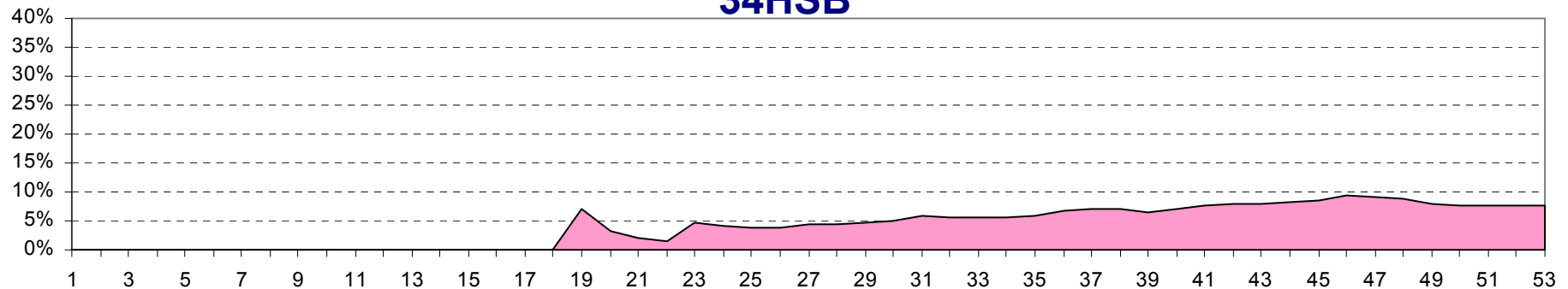


2004 Weekly Average User Unsupportable Time (continued)

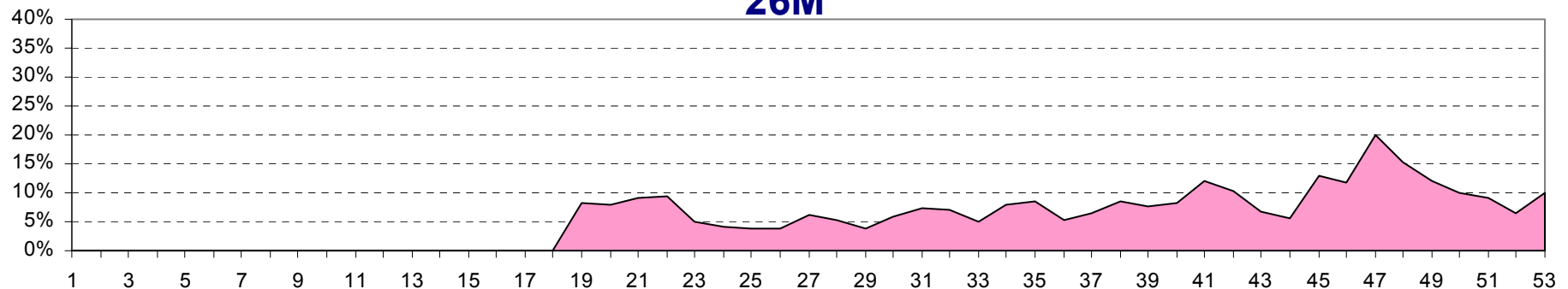
34BWG2

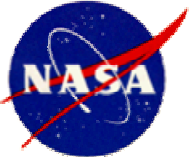


34HSB



26M

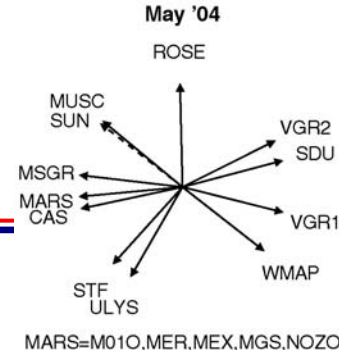




RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2004 – May (Weeks 19 - 22)



EVENTS

DSS-15 approved downtime (antenna controller replacement)

DSS-46 approved downtime (servo drive upgrade) ending in week 21

Cassini approach and TCM (DOY 147)

European VLBI Network E500 J-M4 quarterly event in week 22

Genesis maneuver in week 22, DOY 146 and 147

Goldstone Solar System Radar Venus radar speckle displacement (RSD) and Mercury observation in week 21

Gravity Probe-B BR088n SOC-M4 quarterly epoch in week 20

Hayabusa (MUSES-C) trim maneuvers 3 and 4

Mars Odyssey mapping

Opportunity (MER1) surface operations

Spirit (MER2) surface operations, ending in week 20 on DOY 132

Voyager 1 ASCAL (DOY 125) and MAGROL (DOY 128) support in week 19

Wind TCM in week 20



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2004 – May (Weeks 19 - 22) (continued)



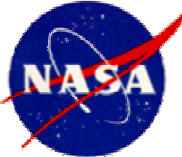
RECOMMENDATIONS

Mars Program agree to accommodate regularly required maintenance performed on 70M antennas.

ANALYSES

(70M) Moderate to severe unsupportable time is forecast for DSS Maintenance in weeks 19, 20 and 22. The hours requested for antenna maintenance are in contention with support requested for M01O mapping and MER surface operations.

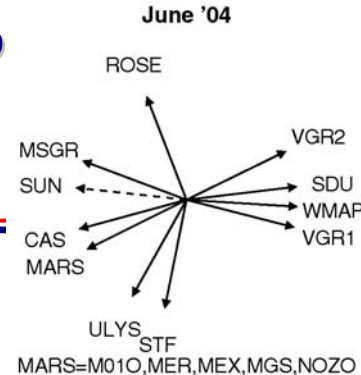
Contention levels on the 34HEF, 34BWG1, 34BWG2, 34HSB, and 26M subnets are workable and should resolve during final schedule preparations and negotiations.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2004 – June (Weeks 23 - 26)



EVENTS

**DSS-15 approved downtime (antenna controller replacement)
ending in week 24**

**DSS-43 proposed downtime (elevation rebalance and structural reinforcement)
beginning in week 25 on Saturday DOY 171 at 0000 and ending in week 26 at 2400 on
Sunday DOY 179.**

Cassini approach, TCM in week 25 (DOY 168), and critical sequence in week 26

**Goldstone Solar System Radar Asteroid 1998 SF36 in week 25 and 26 and Venus RSD in
weeks 23 – 26**

Ground Based Radio Astronomy RA500 SOC-M4 in week 23

Hayabusa (MUSES-C) trim 4 maneuver support in week 23

Mars Express occultation support in weeks 25 and 26

Mars Odyssey mapping

MESSENGER Venus flyby 1 in weeks 24 – 26

Opportunity (MER1) surface operations, ending in week 25 on DOY 167

Rosetta deep space maneuver 1 (DSM-1) in weeks 23 and 24



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

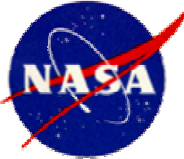
2004 – June (Weeks 23 - 26)



EVENTS (continued)

SOHO HSO continuous support

Voyager 2 MAGROL in week 25, DOY 170



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2004 – June (Weeks 23 - 26) (continued)

RECOMMENDATIONS

Approve DSS-43 downtime for rebalance beginning in week 25 on Saturday at 0000 and ending in week 26 at 2400 on Sunday DOY 179.

Mars Program agree to accommodate regularly required maintenance performed on 70M antennas through week 25, DOY 170.

Cluster remove DSS-43 from SSO support request in week 26.

☺ **DSS delete DSS-43 bearing maintenance and reduce DSS-14 routine maintenance to one 8-hour support in week 25.**

GBRA change M-wave spectroscopy support from 70M to DSS-14,63 in week 26.

M01O change 2 standalone passes planned on the 70M and all passes on the 70M and DSS-43,63 in week 26 to DSS-14,63. MSPA three passes per week with NOZO radio science in weeks 25 and 26.

NOZO MSPA three passes per week with M01O in weeks 25 and 26.

ULYS delete two 5-hour passes planned at DSS-43,63 in week 25 and six passes in week 26. Increase two 5-hour 34BWG1 passes in week 25 to 7 hours and increase six 5-hour 34BWG1 passes to 7 hours in week 26.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2004 – June (Weeks 23 - 26) (continued)

RECOMMENDATIONS

☺ VGR1 change U/L support from 70M to DSS-14,63 in week 26.

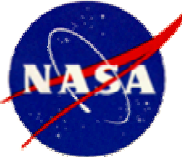
☺ VGR2 delete two 4-hour routine passes planned at DSS-43 in week 25. Delete seven 4-hour passes in week 26 and change U/L support planned at DSS-43 to BLF support using DSS-34.

WMAP change routine request on two passes in week 25 and seven passes in week 26 from 70M to DSS-14,63.

ANALYSES

(70M) Moderate to severe unsupportable time is forecast for DSS Maintenance in weeks 23, 24 and 25. The hours requested for antenna maintenance are in contention with support requested for M01O mapping and MER1 surface operations. The proposed DSS-43 downtime is in contention with requirements supporting Cluster SSO, GBRA M-wave spectroscopy, M01O mapping, NOZO radio science, ULYS, VGR1 U/L, WMAP, and VGR2 routing and U/L support.

Contention levels on the 34HEF, 34BWG1, 34BWG2, 34HSB, and 26M subnets are workable and should resolve during final schedule preparations and negotiations.

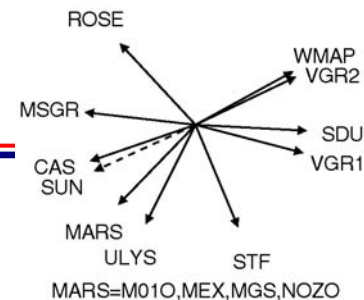


RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2004 – July (Weeks 27 - 31)

July '04



EVENTS

**DSS-14 approved downtime (antenna controller replacement)
beginning in week 28**

Cassini critical sequencing in week 27 and SOI (DOY 183 and 184)

Genesis maneuver in week 27, DOY 182 and 183

Goldstone Solar System Radar Venus RSD in weeks 27 and 28

Gravity Probe-B BR088n SOC-M4 quarterly epoch in week 28

Mars Express occultation support in weeks 27 and 28

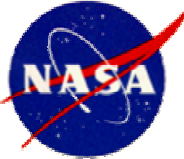
Mars Odyssey mapping

MESSENGER Venus flyby in weeks 27 and 28

SOHO HSO continuous support

Wilkinson Microwave Anisotropy Probe maneuver in week 31

Wind pre-maneuver support in weeks 28 and 29 and TCM in week 30



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2004 – July (Weeks 27 - 31) (continued)

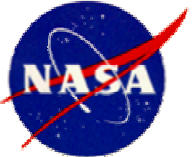


RECOMMENDATIONS

None.

ANALYSES

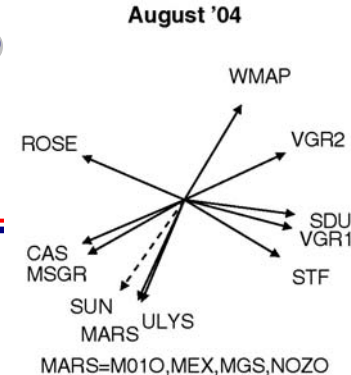
Contention levels on the 70M, 34HEF, 34BWG1, 34BWG2, 34HSB, and 26M subnets are workable and should resolve during final schedule preparations and negotiations.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2004 – August (Weeks 32 - 35)



EVENTS

DSS-14 approved downtime (antenna controller replacement)

DSS-45 proposed downtime (life extension) beginning in week 33

Genesis maneuvers and Earth return, beginning in week 33

Lunar-A launch (August 13th, week 33, DOY 226) and early orbit phase (LEOP)

Mars Express solar corona, beginning in week 34

Mars Odyssey prime mission mapping, ending in week 35, DOY 237

SOHO HSO continuous support

Voyager 1 MAGROL in week 32, DOY 220



RESOURCE ALLOCATION REVIEW BOARD

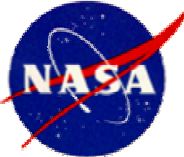
Events, Recommendations and Analyses

2004 – August (Weeks 32 - 35) (continued)

RECOMMENDATIONS

Approve DSS-45 downtime for life extension in weeks 33 – 35.

- ☺ Cluster remove DSS-45 from SSO resource request in weeks 33 – 35 and from MSO request in week 35. (2)
- ☺ M01O reduce 1 DSS-63 pass in week 33 to 4 hours and change the resources allocated on the support requested at DSS-15,45 to DSS-15 only in weeks 33 and 34. (1, 2)
- ☺ MGS change the allocated resources for 2 to 3 passes from 34HEF to DSS-15,65 in weeks 33 – 35. (2)
- RFC support the CAT M&E requested in week 33 at DSS-15\65. (2)
- ☺ SDU change the allocated resources on 1 pass/week from 34HEF to DSS-15,65 in weeks 33 – 35. (2)
- SGP delete the DSS-45 support planned in week 34. (2)
- ☺ ULYS delete the 5 to 6 D/L passes planned at DSS-45,65 in weeks 33 – 35 and increase the 5 to 6 passes planned at DSS-24,54 from 5 hours to 7 hours. (2)
- ☺ VGR2 change allocated resources on 7 passes from DSS-43,45 to DSS-43 only in weeks 33 – 35. (2)



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

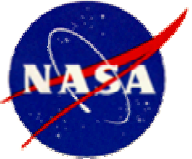
2004 – August (Weeks 32 - 35) (continued)



ANALYSES

1. (70M) Moderate unsupportable time is forecast for DSS Maintenance in week 33. Contention is due to the M01O request for eleven 7-hour passes using DSS-43,63 (DSS-14 is down). Three periods of preventative maintenance are requested and on one of the maintenance days the M01O request requires support from both antennas.
2. (34HEF) Requirements supporting Cluster SSO and MSO observations, DSN antenna calibration, GBRA Host Country, M01O mapping, MGS mapping and beta supplement, RFC CAT M&E, Stardust TCM support, SGP crustal dynamics, and ULYS, and VGR2 routine tracking are in contention with the proposed DSS-45 downtime that begins in week 33.

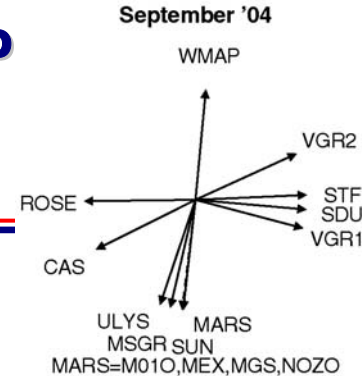
Contention levels on the 34BWG1, 34BWG2, 34HSB, and 26M subnets are workable and should resolve during final schedule preparations and negotiations.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2004 – September (Weeks 36 - 40)



EVENTS

DSS-14 approved downtime (antenna controller replacement)

DSS-45 proposed downtime (life extension)

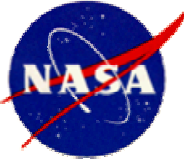
Genesis Earth return, maneuvers, and backup orbit support

Lunar-A launch and early orbit phase (LEOP)

Mars Express solar corona

Stardust maneuver support and TCM (week 40, DOY 275)

Voyager 2 DTR P/B (DOY 252) in week 37 and ASCAL (DOY 257) and MAGROL (DOY 260) support in week 38



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2004 – September (Weeks 36 - 40) (continued)

RECOMMENDATIONS

Approve DSS-45 downtime for life extension.

CHDR move seven 34BWG1 passes to the 26M and increase pass duration from 1 hour to 2 hours. (2)

☺ Cluster remove DSS-45 from SSO resource request. (1)

☺ DSN reduce DSS-34, DSS-43, DSS-63, and DSS-65 antenna calibrations to 4.5 hours. (1, 2)

GBRA reduce M-wave spectroscopy support at DSS-43 and DSS-63 to 4 hours and move week 37 DSS-45 Host Country support to week 29. (1, 2)

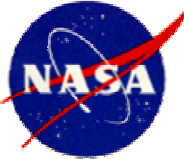
☺ IMAG change allocated resources on 6 of the 13 passes planned on the 34BWG1 to DSS-16/15,66/65. (2)

☺ MGS change allocated resources on 2 to 3 passes from 34HEF to DSS-15,65. (1)

RFC move the CAT M&E pair planned in weeks 38 and 39 to weeks 25 and 26. (1)

SGP move the DSS-45 support planned in week 38 and 40 to weeks 27 and 29. (1)

☺ STF move 14 passes from DSS-25,34,54 to DSS-15,25,55,65. (2)



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2004 – September (Weeks 36 - 40) (continued)

RECOMMENDATIONS (continued)

- ☺ ULYS delete the 6 D/L passes planned at DSS-45,65 in weeks 36 – 39 and increase the 6 passes planned at DSS-24,54 from 5 hours to 7 hours. (1, 2)
- ☺ VGR2 change allocated resources on 6 to 7 passes from DSS-43,45 to DSS-43. (2)

ANALYSES

1. (34HEF) Requirements supporting Cluster SSO observations, GBRA Host Country, MGS mapping and beta supplement, RFC CAT M&E, Stardust TCM support, SGP crustal dynamics, and ULYS and VGR2 routine tracking are in contention with the proposed DSS-45 downtime.
2. (34BWG1) Moderate unsupportable time is forecast for Chandra, DSN antenna calibration, Genesis Earth recovery, IMAGE, and SIRTF. Contention is due to user view period overlap and oversubscription of the Canberra complex when Genesis and IMAGE are in view primarily from DSS-34.

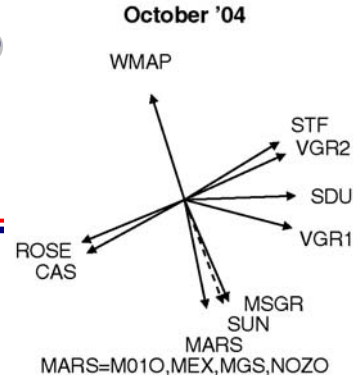
Contention levels on the 70M, 34BWG2, 34HSB, and 26M subnets are workable and should resolve during final schedule preparations and negotiations.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2004 – October (Weeks 41 - 44)



EVENTS

DSS-14 approved downtime (antenna controller replacement)

DSS-45 proposed downtime (life extension) in weeks 41 and 42

DSS-45 approved downtime (task changed to life extension) in weeks 43 and 44

Genesis backup orbit support

Ground Based Radio Astronomy RA500 SOC-M4 event in week 44

Lunar-A launch and early orbit phase (LEOP)

Mars Express solar corona

Rosetta DSM-1 support

Stardust TCM support

Wind TCM support in week 43



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2004 – October (Weeks 41 - 44) (continued)

RECOMMENDATIONS

Approve the DSS-45 downtime for life extension in weeks 41 and 42.

☺ Cluster remove DSS-45 from SSO resource request in weeks 41 and 42. (1)

☺ DSN move week 42 DSS-45 antenna calibration to week 50 and reduce weeks 42 and 43 DSS-24 and DSS-34 antenna calibrations to 4.5 hours. (1)

GBRA move week 41 DSS-45 Host Country support to week 26. (1)

MSGR change allocated resources from DSS-26,34,54 to DSS-26,54. (2)

RFC delete the DSS-15\45 CAT M&E in week 42. (1)

☺ SDU remove DSS-45 from allocated resources in weeks 41 and 42. (1)

SGP delete the week 41 DSS-45 crustal dynamics. (1)

☺ SOHO reduce the 5-day continuous TSO request to 3 days in week 41 and reduce the routine 9.5 hour passes to 6 hours in weeks 41 and 42. (3)

☺ STF move 14 passes requested at DSS-25,34,54 and the 34HEF in weeks 41 – 43 to DSS-15,25,26,55. (1, 2)

☺ ULYS reduce 3 – 4 passes requested on the 34BWG1 subnet to 6 hours and change the allocated resources to DSS-24,54. (2)



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2004 – October (Weeks 41 - 44) (continued)

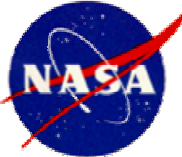
RECOMMENDATIONS (continued)

- ☺ VGR2 reduce routine support requested at DSS-43,45, DSS-43,34, and DSS-34,45 to 6-hour passes and change the allocated resources to DSS-43. (1,2)

ANALYSES

1. (34HEF) Requirements supporting Cluster SSO observations, DSN antenna calibrations, GBRA Host Country, MGS mapping and beta supplement, RFC CAT M&E, SDU TCM support, SGP crustal dynamics, STF, and VGR2 routine tracking are in contention with the proposed DSS-45 downtime in weeks 41 and 42.
2. (34BWG1) Moderate to severe unsupportable time is forecast for CHDR, Cluster, DSN antenna calibrations, GNS backup orbit support, IMAG, MSGR, STF, ULYS, VGR2, and Wind routine support. Contention is primarily due to user view period overlap and oversubscription of the Canberra complex when GNS and IMAG are in view primarily from DSS-34.
3. (26M) Moderate unsupportable time is forecast for ACE, DSS Maintenance, and SOHO in weeks 41 and 42. SOHO routine and TSO support is in contention with the hours requested for maintenance and with support requested for ACE, LUNA LEOP, and Polar.

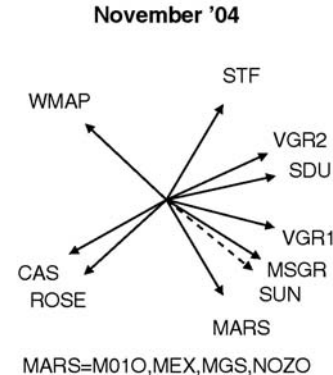
Contention levels on the 70M, 34BWG2, and 34HSB, subnets are workable and should resolve during final schedule preparations and negotiations.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2004 – November (Weeks 45 - 48)



EVENTS

DSS-14 approved downtime (antenna controller replacement)
in weeks 45 – 47

DSS-14 proposed downtime (antenna controller replacement) in week 48

DSS-45 approved downtime (task changed to life extension)

Cassini probe checkout in week 48, DOY 328

European VLBI Network E-500 M-J4 quarterly epoch in week 46

Goldstone Solar System Radar Mercury observation in week 48

Gravity Probe-B BR088n SOC-M4 quarterly epoch in week 48

Lunar-A launch and early orbit phase (LEOP) ending in week 47

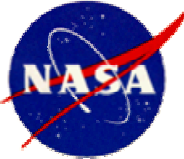
Mars Express solar corona in weeks 45 – 47

Rosetta DSM-1 support

Space Technology 5 (ST-5) launch and phase A and B support in weeks 47 and 48

Voyager 1 ASCAL (DOY 307) and MAGROL (DOY 310) in week 45 and DTR P/B in week 48

Wilkinson Microwave Anisotropy Probe maneuver in week 46



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2004 – November (Weeks 45 - 48) (continued)

RECOMMENDATIONS

Approve the DSS-14 downtime for antenna controller replacement in week 48.

☺ DSN delete week 48 DSS-14 antenna calibration. (1)

GBRA delete week 48 DSS-14 M-wave spectroscopy. (1)

☺ GPB move BR088n SOC-M4 from week 48 to week 50 . (1)

GSSR delete week 48 Mercury observation. (1)

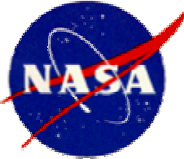
☺ M01O change week 48 allocated resources on standalone and MSPA passes with MGS from 70M to DSS-43,63. (1)

☺ MGS change week 48 allocated resources from 70M to DSS-43,63 on the 2 MSPA passes with M01O. (1)

☺ NOZO change week 48 allocated resources from DSS-14,63 to DSS-63. (1)

☺ VGR1 change week 48 allocated resources on the U/L pass from 70M to DSS-43,63 and move the recorded DTR P/B recovery from week 48 to week 50. (1)

◆ 34BWG1 and 26M recommendations for weeks 47 and 48 are tentative pending delivery and processing of an updated ST-5 viewperiod file. (2,3)



RESOURCE ALLOCATION REVIEW BOARD

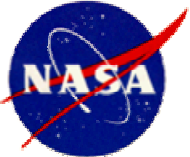
Events, Recommendations and Analyses

2004 – November (Weeks 45 - 48) (continued)

ANALYSES

1. (70M) Requirements supporting DSN antenna calibration, GBRA M-wave spectroscopy, GPB quarterly epoch, GSSR Mercury observation, M01O mapping, MGS mapping, NOZO radio science, and VGR1 DTR P/B recovery and routine U/L are in contention with the proposed DSS-14 downtime in week 48.
2. (34BWG1) Moderate to severe unsupportable time is forecast for DSN antenna calibrations, DSS Maintenance, MEX, ST-5, ULYS and Wind in weeks 47 and 48. Contention is due to requirements supporting the ST-5 launch. Analysis of 34BWG1 contention is tentative until a view period file for the November 19, 2004 launch date is delivered and processed.
3. (26M) Moderate to severe unsupportable time is forecast for ACE, DSS Maintenance, INTG, SOHO and ST5 in weeks 47 and 48. Contention is due to requirements supporting the ST5 launch. Analysis of 26M contention is tentative until a view period file for the November 19, 2004 launch date is delivered and processed.

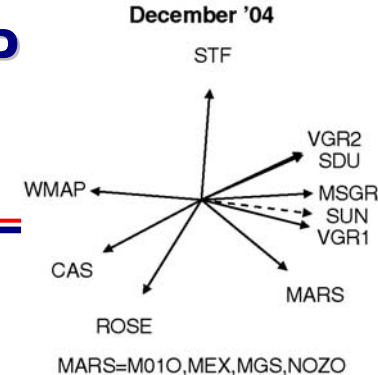
Contention levels on the 70M, 34BWG2, and 34HSB, subnets are workable and should resolve during final schedule preparations and negotiations.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2004 – December (Weeks 49 - 53)



EVENTS

**DSS-14 proposed downtime (antenna controller replacement)
ending in week 49**

**DSS-45 approved downtime (task changed to life extension)
ending in week 49**

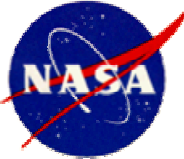
**Cassini probe target TCM, critical sequence U/L, and probe C/O and release support
beginning in week 50**

**Deep Impact Flyby launch and initial acquisition (December 30, 2004) and launch phase
support in week 53**

GOES-N launch not earlier than December 1, 2004

Goldstone Solar System Radar Mercury observation in week 53

Mars Express occultation support in weeks 52 and 53



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2004 – December (Weeks 49 - 53) (continued)

RECOMMENDATIONS

Approve the DSS-14 downtime for antenna controller replacement in week 49.

☺ DSN delete the week 49 DSS-14 antenna calibration.

GBRA delete DSS-14 planet radio astronomy in week 49 and move DSS-14 M-wave spectroscopy to week 50.

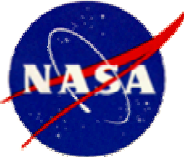
☺ M01O change week 49 allocated resources on standalone and MSPA passes with MGS from 70M to DSS-43,63.

☺ MGS change week 49 allocated resources from 70M to DSS-43,63 on the 2 MSPA passes with M01O.

☺ NOZO change week 49 allocated resources from DSS-14,63 to DSS-63.

☺ VGR1 change week 49 allocated resources on routine U/L pass from 70M to DSS-63 and change 7 passes planned at DSS-63,65 to DSS-15,65.

WMAP change week 49 allocated resources from 70M to DSS-43,63.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2004 – December (Weeks 49 - 53) (continued)

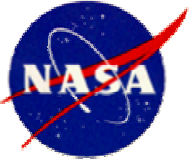


ANALYSES

(70M) Requirements supporting DSN antenna calibration, GBRA microwave spectroscopy and planet radio astronomy, M01O mapping, MGS mapping, NOZO radio science, VGR1 and WMAP routine tracking are in contention with the proposed DSS-14 downtime in week 49.

Contention levels on the 34HEF, 34BWG1, 34BWG2, 34HSB, and 26M subnets are workable and should resolve during final schedule preparations and negotiations.

- ◆ The GOES-N launch is planned for not earlier than December 1, 2004 and requirements supporting the launch to L+20 days may impact some users of DSN resources. GOES-N view periods are not available at this time however current low levels of contention forecast on the network should help provide some time on alternate antennas should offloading of the 26M subnet be required to support the launch activity.

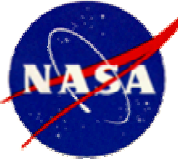


RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses



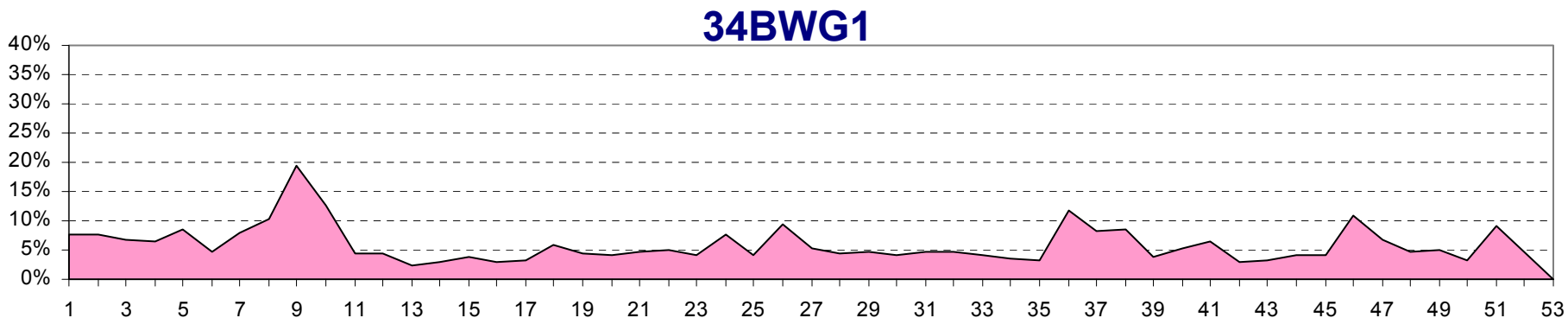
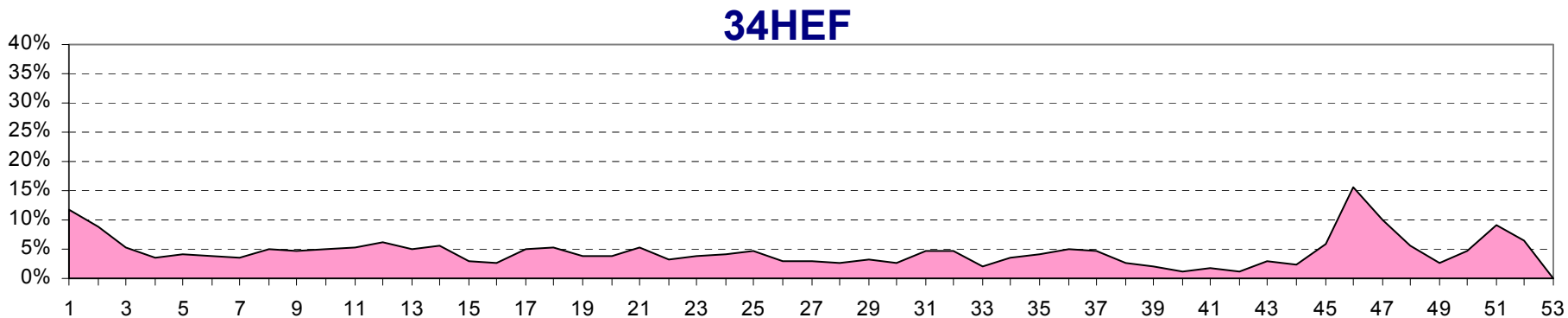
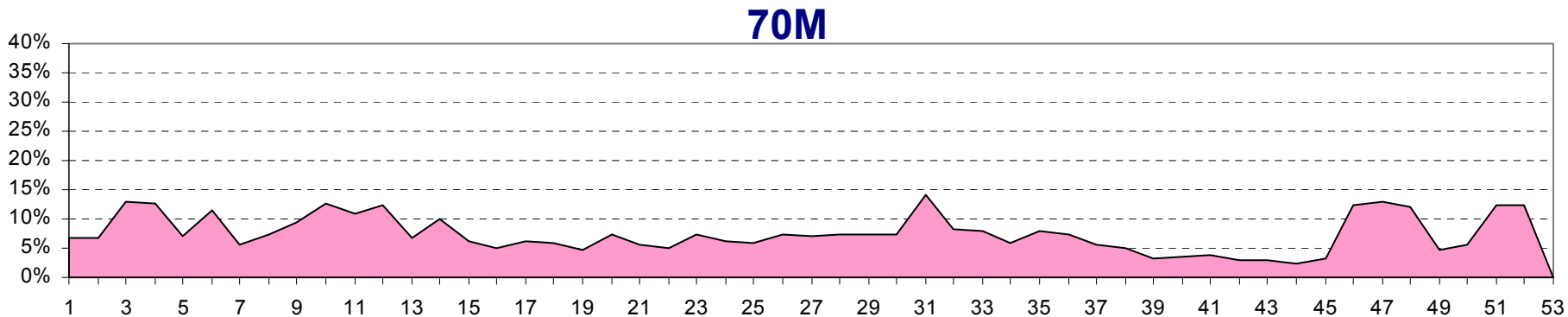
2005 Events, Recommendations and Analyses

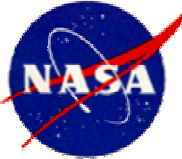


RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2005 Weekly Average User Unsupportable Time





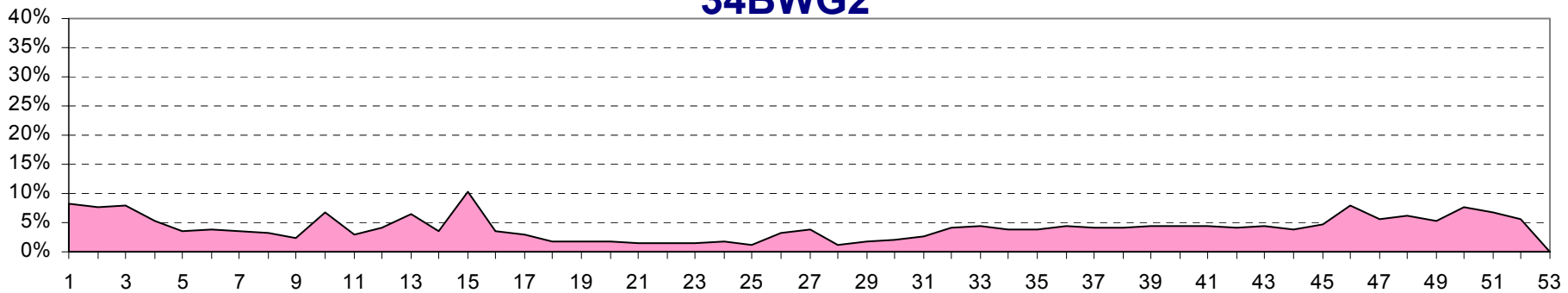
RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

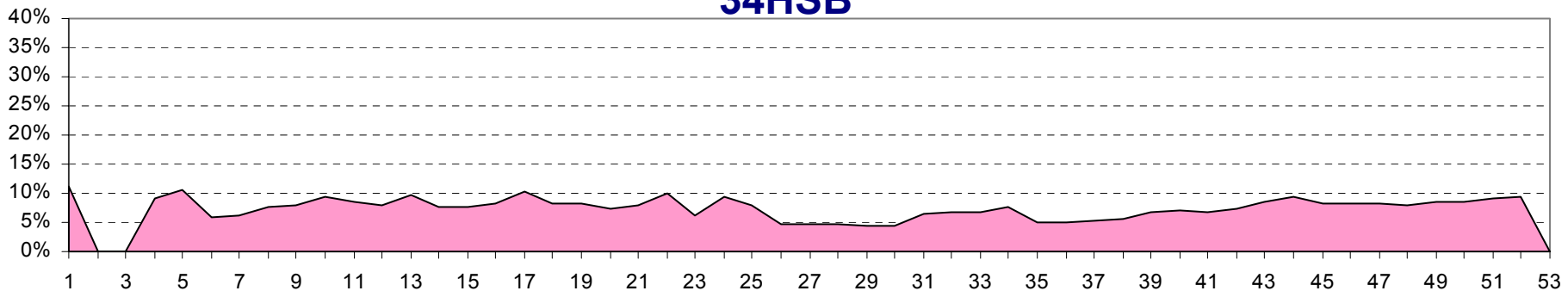


2005 Weekly Average User Unsupportable Time (continued)

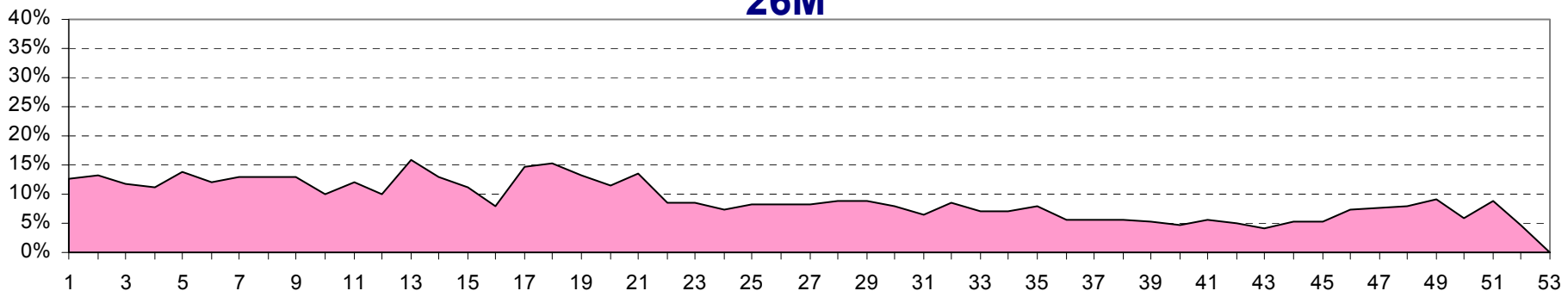
34BWG2

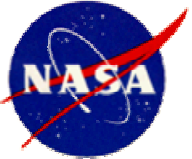


34HSB



26M

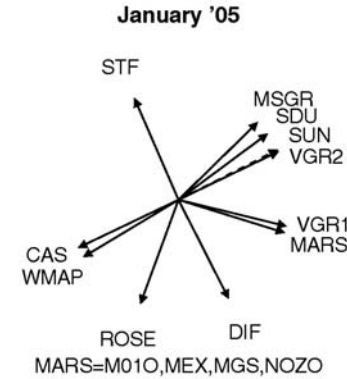




RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2005 – January (Weeks 01 - 04)



EVENTS

DSS-26 approved downtime (microwave subsystem controller)
beginning in week 04

DSS-27 proposed downtime (NSP Implementation) in weeks 01 – 04

DSS-27 approved downtime (microwave subsystem controller) in weeks 02 and 03

DSS-63 proposed downtime (microwave subsystem controller) in weeks 03 and 04

Cassini probe entry in weeks 01 and 02, and tour

Deep Impact Flyby LEOP

Gravity Probe-B quarterly epoch in week 04

Hayabusa TCM-2 in weeks 02 – 04

Mars Express orbital science and occultation in weeks 03 and 04

Wind TCM in week 02, DOY 016



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2005 – January (Weeks 01 - 04) (continued)

RECOMMENDATIONS

Approve DSS-27 and DSS-63 downtimes.

CAS change tour passes from DSS-14,63 to DSS-14, and from DSS-15,24,25,26,54,55,65 and DSS-15,24,25,54,55,65 to DSS-25,65 in weeks 03 and 04. (1)

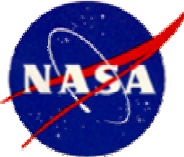
☺ Cluster remove DSS-27 from resource request in weeks 01 and 04. (5)

GBRA delete DSS-63 Host Country support in week 03, plan three 8-hour supports for DSS-43 Host Country in week 04, and move M-wave spectroscopy and new proposals from 70M to DSS-14,43 in weeks 03 and 04. (1)

☺ GPB move supports from week 04 to week 07. (1)

☺ M01O change one 10-hour 70M pass to 13 hours, move to DSS-43, and MSPA with MGS in weeks 01 and 02. In weeks 03 and 04 change four 70M passes from 10 hours to 13 hours, move to DSS-43, and MSPA with MGS. Of the remaining three 10-hour 70M passes in weeks 03 and 04, reduce one pass to 4 hours and move to DSS-43, move one pass to DSS-43, and move one pass to DSS-14,43. (1)

☺ MEX move orbital science and occultation DSS-14,63 passes to DSS-14,65 in weeks 03 and 04. (1)



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2005 – January (Weeks 01 - 04) (continued)

RECOMMENDATIONS (continued)

☺ MGS reduce one 70M pass in weeks 01 and 02 and four 70M passes in weeks 03 and 04 from 14 hours to 13 hours, move to DSS-43, and MSPA with M01O. Change 34BWG1 passes to DSS-24,34,65, and DSS-25,34,55 passes to DSS-25,34,65 (1, 3, 4)

MSGR change 34BWG1 support to DSS-24,34,55 in week 04. (3)

☺ NOZO move 70M passes to DSS-14 in weeks 03 and 04. (1)

SGP move DSS-15 support in week 02 to week 04. (2)

☺ SOHO delete TSO support and restore routine support in week 01. (5)

WMAP move 70M passes to DSS-14,43 in weeks 03 and 04. (1)



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

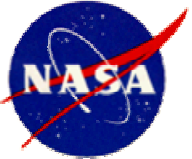
2005 – January (Weeks 01 - 04) (continued)



ANALYSES

1. (70M) Moderate contention is forecast for DSS maintenance, GSSR Mercury, and Mars Projects in weeks 01 and 02. Proposed DSS-63 microwave subsystem controller (USC) downtime causes moderate to extreme contention for DSS maintenance, GBRA Host Country and Mars Projects in Weeks 03 and 04.
2. (34HEF) DIF continuous launch support causes moderate contention for SGP DSS-15 support in week 02.
3. (34BWG1) Moderate contention is forecast for DSS maintenance, Mars Projects, MSGR, ULYS, and VGR1.
4. (34BWG2) Moderate contention is forecast for DSS maintenance, DIF, Mars Projects, and VGR1.
5. (34HSB) Proposed DSS-27 downtime is in contention with Cluster and SOHO TSO in week 01, and Cluster in week 04.

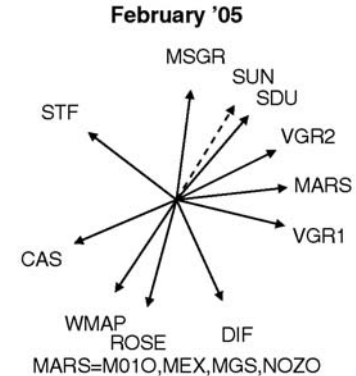
Contention levels on the 26M subnet are workable and should resolve during final schedule preparations and negotiations.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2005 – February (Weeks 05 - 08)



EVENTS

DSS-25 approved downtime (microwave subsystem controller) beginning in week 08

DSS-26 approved downtime (microwave subsystem controller) ending in week 05

DSS-65 proposed downtime (relocation, life extension) in weeks 05 – 07

DSS-65 approved downtime (antenna controller replacement) beginning in week 08

Deep Impact Flyby TCM in week 08

European VLBI Network E500 quarterly epoch in week 07

Ground Based Radio Astronomy RA500 quarterly epoch in week 06

Rosetta Earth swingby in weeks 07 and 08

Voyager 1 MAGROL in week 05, DOY 035



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2005 – February (Weeks 05 - 08) (continued)



RECOMMENDATIONS

Approve DSS-65 downtime.

☺ M01O MSPA two to three 10-hour 70M passes with MGS. (2)

☺ MGS reduce seven 34HEF passes in weeks 05 – 07 to 10 hours and change allocated resources from 34HEF to DSS-15,45. MSPA two to three 10-hour 34BWG1 passes with M01O on the 70M in weeks 05 – 08. (1, 2)

RFC change CAT M&E support from DSS-15\45,15\65 to DSS-15\45,15\63 in weeks 05 and 06 and change DSS-15\65 clock sync support to DSS-14\63 in weeks 05 and 07. (1)

☺ SDU change the 1 pass per week planned at the 34HEF to DSS-15,45 in weeks 05 – 07. (1)

SGP change the 24-hour crustal dynamics supports at DSS-65 in week 06 and at DSS-15 in week 08 each to three 8-hour supports. Move the DSS-65 supports from week 06 to week 04. (1)

☺ STF change support planned at 34HEF and DSS-15,34,65 to DSS-15,45,55. (1)



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

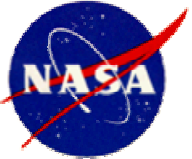
2005 – February (Weeks 05 - 08) (continued)



ANALYSES

1. (34HEF) The proposed DSS-65 downtime in weeks 05 – 07 is in contention with requirements supporting CAS tour, DSN antenna calibration, MGS mapping and beta supplement, RFC CAT M&E and clock sync support, SDU routine support, SGP crustal dynamics, and STF routine support.
2. (34BWG1) Moderate unsupportable time is forecast for LUNA, MGS, and Wind in weeks 05, 07, and 08. Contention is due to requirements supporting IMAG, LUNA, MEX orbital science, MGS mapping and beta supplement, MSGR, ROSE Earth swingby, ULYS, Wind, and the impact of downtime at DSS-26 in week 05, at DSS-25 in week 08, and with the planned and proposed downtime at DSS-65.

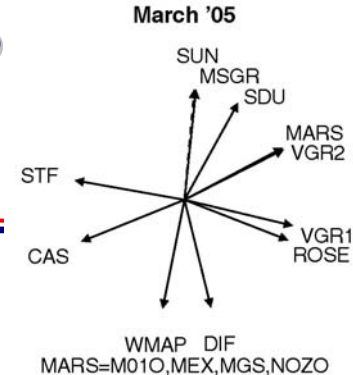
Contention levels on the 70M, 34BWG2, 34HSB, and 26M subnets are workable and should resolve during final schedule preparations and negotiations.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2005 – March (Weeks 09 - 13)



EVENTS

DSS-25 approved downtime (microwave subsystem controller)
ending in week 09

DSS-65 approved downtime (antenna controller replacement, relocation, life extension)

Deep Impact Flyby TCM in weeks 09 – 12, and comet encounter and rehearsal in week 12

Goldstone Solar System Radar Asteroid 1998WT in weeks 09 and 10, and Mercury RSD
GBT in weeks 12 and 13

Hayabusa rendezvous in week 13

Lunar-A LOI in weeks 09 and 10

Rosetta Earth swingby in weeks 09 – 11

Voyager 2 DTR P/B in week 10, DOY 068, ASCAL in week 11, DOY 073, and MAGROL in
week 11, DOY 076

Wilkinson Microwave Anisotropy Probe maneuver in week 11



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2005 – March (Weeks 09 - 13) (continued)



RECOMMENDATIONS

☺ DSS reduce DSS-24 maintenance from 8 hours to 6 hours in week 10 and reduce DSS-27 maintenance from 8 hours to 6 hours in weeks 09 and 13. (3, 4)

M01O MSPA five mapping passes with MEX orbital science on 70M in weeks 09 and 10. (3)

MEX increase duration of five passes from 6 hours to 10 hours and MSPA with M01O on 70M in weeks 09 and 10. Move two passes from DSS-24,54 to DSS-14,63 in week 09 and two passes from DSS-24,55 to DSS-14,63 in weeks 10 and 11. Move five passes from DSS-24,55 to DSS-24,54 in week 11 and seven passes from DSS-24,55 to DSS-24,54 in weeks 12 and 13. (3)

MGS MSPA three 14-hour mapping and beta supplement passes with MEX on DSS-15,55 in weeks 09 and 10. Move DSS-15,45,63 passes to DSS-25,45,55 and 34BWG1 passes to DSS-25,34,55 in weeks 11 – 13. (1, 3)

☺ STF change DSS-15,34,65 passes to DSS-15,45,55. (2)

☺ ULYS move 34BWG1 passes to DSS-63,15 in weeks 09 and 10. (3)



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

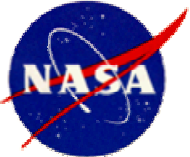
2005 – March (Weeks 09 - 13) (continued)



ANALYSES

1. (70M) Moderate contention for Mars Projects in weeks 11 – 13.
2. (34HEF) Approved DSS-65 downtime is in contention with STF.
3. (34BWG1) Moderate to severe contention for DSS maintenance, MEX, MGS, LUNA LOI, ROSE Earth swingby, ULYS and Wind in weeks 09 and 10.
4. (34HSB) Moderate contention on DSS-27 caused by SOHO TSO in weeks 09 and 13.

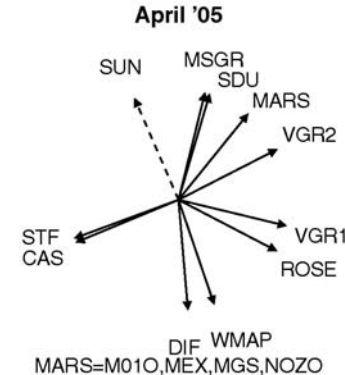
Contention levels on the 34BWG2 and 26M subnets are workable and should resolve during final schedule preparations and negotiations.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2005 – April (Weeks 14 - 17)



EVENTS

DSS-15 approved downtime (microwave subsystem controller)
in weeks 15 and 16

DSS-54 approved downtime (microwave subsystem controller) in week 15

DSS-55 approved downtime (microwave subsystem controller) in week 17

DSS-65 approved downtime (antenna controller replacement, relocation, life extension)
ending in week 14

DSS-65 proposed downtime (antenna controller replacement, relocation, life extension)
beginning in week 15

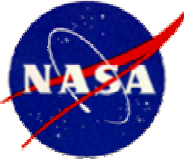
Deep Impact Flyby TCM in weeks 16 and 17

Goldstone Solar System Radar Mercury RSD GBT in week 14

Hayabusa rendezvous

Voyager 1 DTR array in week 17, DOY 118, ASCAL in week 18, DOY 123, and MAGROL in
week 18, DOY 126

Wind TCM in week 15, DOY 104



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2005 – April (Weeks 14 - 17) (continued)

RECOMMENDATIONS

Approve DSS-65 downtime.

CAS change tour passes from DSS-24,25,26,55,65 to DSS-24,25,26,55 and from DSS-14/25,63/65 to DSS-14/25,63/55 in week 15. Change from DSS-24,25,26,54,55,65 to DSS-24,25,26,54,55 in week 16. Change from DSS-15,24,25,26,54,65 to DSS-15,24,25,26,54 in week 17. (2)

☺ DSS reduce DSS-27 maintenance from 8 hours to 6 hours in week 17. (4)

☺ Hayabusa change resources from DSS-25,34,65 to DSS-25,34,55. (2)

☺ MEX change orbital science resources from DSS-24,55 to DSS-24,54 in week 14, from DSS-26,55 to DSS-24,63 in week 15, and from DSS-24,54 to DSS-24,63 in week 17. (2, 3)

☺ MGS change mapping and beta supplement resources from DSS-14,45,63 to DSS-15,45,55 in week 14, from DSS-25,45,65 to DSS-25,45,55 in weeks 15 and 16, and from 34HEF to DSS-15,45,54 in week 17. (1, 2)

MSGR change resources from DSS-26,34,65 to DSS-26,45,55 in week 15. (2)

RFC change DSS-15\65 clock sync support to DSS-14\63 in week 17. (2)

☺ SDU change support from 34HEF passes to DSS-15,45 passes in weeks 15 – 17. (2)



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2005 – April (Weeks 14 - 17) (continued)

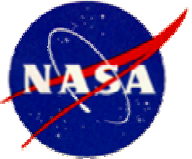
RECOMMENDATIONS (continued)

- ☺ STF change 34HEF passes to DSS-15,45,55 in week 14, to DSS-25,45,55 in weeks 15 and 16, and to DSS-25,45,54 in week 17. (2)

ANALYSES

1. (70M) Moderate contention for MGS in week 14.
2. (34HEF) Proposed DSS-65 downtime creates contentions for CAS tour, Hayabusa rendezvous, MGS mapping and beta supplement, MSGR, RFC clock sync, SDU, and STF.
3. (34BWG1) Moderate contention for DSS maintenance and MEX.
4. (34HSB) Moderate contention for DSS-27 caused by SOHO TSO in week 17.

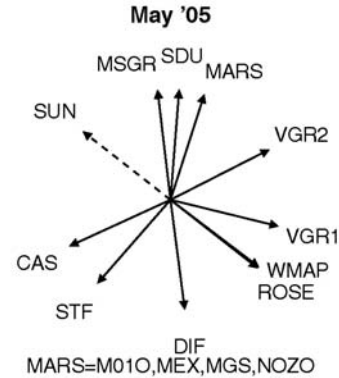
Contention levels on, 34BWG2, and 26M subnets are workable and should resolve during final schedule preparations and negotiations.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2005 – May (Weeks 18 - 21)



EVENTS

DSS-34 approved downtime (X/X-Ka band) beginning in week 18

DSS-65 proposed downtime (antenna controller replacement, relocation, life extension) ending in week 21

Deep Impact Flyby TCM in weeks 18 – 20, and comet approach in week 21

Gravity Probe-B quarterly epoch in week 20

Ground Based Radio Astronomy RA500 in week 21

Hayabusa rendezvous



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2005 – May (Weeks 18 - 21) (continued)



RECOMMENDATIONS

Approve DSS-65 downtime.

CAS change tour passes from DSS-15,24,25,26,54,55,65 to DSS-15,24,25,26,54,55.

Change DSS-14/25,63/65 pass to DSS-14/25,63/55 in week 20. (1)

☺ DSS reduce DSS-16 maintenance from 8 hours to 6 hours in week 18 and DSS-27 maintenance from 8 hours to 6 hours in week 21. (3, 4)

☺ MEX move three DSS-24,54 passes to DSS-26,55. (2)

☺ MGS change 34HEF passes to DSS-15,45,55. (1)

RFC change DSS-15\65 Clock Sync support to DSS-14\63 in weeks 19 and 21. (1)

☺ SDU change from 34HEF passes to DSS-15,45 passes. (1)

SGP delete DSS-65 support in week 20. (1)

☺ STF change 34HEF passes to DSS-15,45,55. (1)

☺ ULYS change 34BWG1 passes to DSS-63,15 in week 18. (2)



RESOURCE ALLOCATION REVIEW BOARD

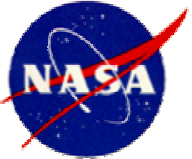
Events, Recommendations and Analyses

2005 – May (Weeks 18 - 21) (continued)

ANALYSES

- 1. (34HEF) Proposed DSS-65 downtime creates contentions for CAS tour, MGS mapping and beta supplement, RFC clock sync, SDU, SGP, and STF.**
- 2. (34BWG1) Moderate contention is forecast for DSS maintenance and MEX. Moderate contention for IMAG, ULYS, and WIND in week 18.**
- 3. (34HSB) Moderate contention is forecast for DSS-27 maintenance caused by SOHO TSO in week 21.**
- 4. (26M) Moderate contention is forecast for DSS maintenance, LUNA, Polar, and SOHO in week 18.**

Contention levels on 70M and 34BWG2 subnets are workable and should resolve during final schedule preparations and negotiations.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2005 – June (Weeks 22 - 26)

EVENTS

DSS-24 approved downtime (microwave subsystem controller) in week 26

DSS-34 approved downtime (X/X-Ka band installation) ending in week 25

Deep Impact Flyby comet approach in weeks 22 – 25, and comet encounter in week 26

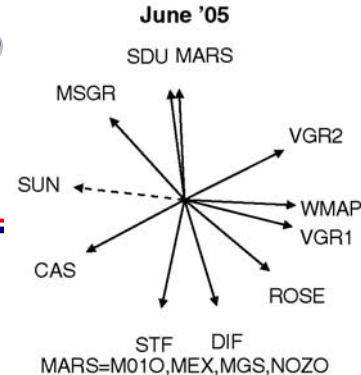
European VLBI Network E500 in week 22

Goldstone Solar System Radar Mercury in weeks 25 and 26

Hayabusa rendezvous in week 22, and trim-5 maneuver in weeks 23 and 24

SOHO HSO beginning in week 26

Voyager 2 MAGROL in week 24, DOY 168





RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2005 – June (Weeks 22 - 26) (continued)



RECOMMENDATIONS

☺ DSS reduce DSS-16 maintenance from 8 hours to 6 hours in week 24, and reduce DSS-27 maintenance from 8 hours to 6 hours in week 25. (3, 4)

GBRA move DSS-45 Host Country support from week 25 to week 26. (1)

☺ MEX move orbital science passes from DSS-24,54 to DSS-26,55 in weeks 22 – 24 and from DSS-26,54 to DSS-26,55 in week 26. (2)

☺ MGS move mapping and beta supplement passes from DSS-24,45,54 to DSS-26,45,55 in week 24 and from DSS-26,34,54 to DSS-26,45,55 in week 26. (2)

☺ ULYS change 10-hour 34BWG1 passes to DSS-63,15 in week 26. (2)



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

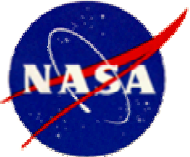
2005 – June (Weeks 22 - 26) (continued)



ANALYSES

1. (34HEF) Moderate contention for GBRA Host Country DSS-45 support in week 25.
2. (34BWG1) Moderate contention for DSS maintenance in weeks 22 and 23. Moderate to severe contention for DSS maintenance and Wind in week 24. Moderate to severe contention for ULYS and Wind in week 26.
3. (34HSB) Moderate contention for DSS maintenance caused by SOHO TSO in week 25.
4. (26M) Moderate contention for DSS maintenance at DSS-16 caused by INTG in week 24.

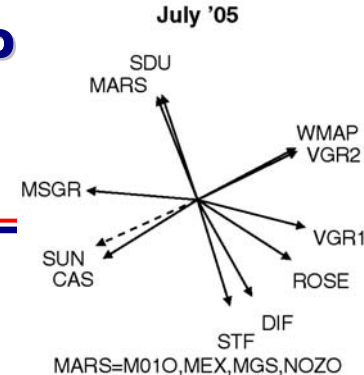
Contention levels on the 70M and 34BWG2 subnets are workable and should resolve during final schedule preparations and negotiations.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2005 – July (Weeks 27 - 30)



EVENTS

DSS-43 proposed downtime (antenna controller replacement, hydrostatic bearing, microwave subsystem controller) in week 29

DSS-43 approved downtime (antenna controller replacement, hydrostatic bearing, microwave subsystem controller) beginning in week 30

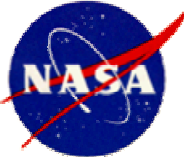
Cassini tour

Deep Impact Flyby comet encounter 70M support and comet impact in week 27, DOY 185

SOHO HSO continuous support

Wilkinson Microwave Anisotropy Probe maneuver in week 27

Wind TCM in week 28, DOY 193



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2005 – July (Weeks 27 - 30) (continued)



RECOMMENDATIONS

Approve DSS-43 downtime in week 29.

☺ DSS move DSS-43 bearing maintenance from Monday to Wednesday, and move DSS-45 maintenance from Wednesday to Monday, in week 27.

GBRA move DSS-43 Host Country support from week 29 to week 28 and move M-wave spectroscopy and new proposals from 70M to DSS-14,63 in week 29.

☺ M01O move mapping passes from 70M to DSS-14,63 in week 29.

MEGA move imagery support from week 29 to week 28.

☺ MEX move bi-static radar from DSS-43 to DSS-63 in week 29.

☺ VGR2 change U/L support in week 29 to DSS-34.

WMAP move from 70M to DSS-14,63 in week 29.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

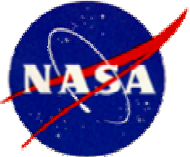
2005 – July (Weeks 27 - 30) (continued)



ANALYSES

(70M) Contention in week 27 is severe for bearing maintenance at DSS-43 due to DIF encounter and impact support on DOY 185 (Monday). DSS-43 downtime proposal (antenna controller replacement, hydrostatic bearing, microwave subsystem controller) is in contention with GBRA Host Country, M-wave spectroscopy and new proposals, M01O mapping, MEGA imagery, MEX bi-static radar, VGR1 routine U/L, VGR2 routine and U/L, WMAP in week 29.

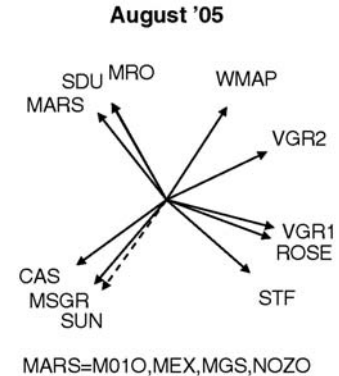
Contention levels on the 34HEF, 34BWG1, 34BWG2, 34HSB, and 26M subnets are workable and should resolve during final schedule preparation and negotiations.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2005 – August (Weeks 31 - 34)



EVENTS

DSS-43 approved downtime (antenna controller replacement, hydrostatic bearing, microwave subsystem controller)

Cassini tour

Goldstone Solar System Radar Asteroid 1992UY4 in week 31

Mars Reconnaissance Orbiter launch (August 10) and launch support in weeks 32 – 34 and TCM in week 34

SOHO HSO continuous

Voyager 1 MAGROL in week 31, DOY 218



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2005 – August (Weeks 31 - 34) (continued)

RECOMMENDATIONS

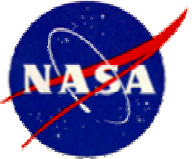
GBRA move M-wave spectroscopy to DSS-63 in week 31.

☺ M01O reduce four of seven 10-hour passes to 8 hours and move from DSS-14,63 to DSS-63 in week 31.

ANALYSES

(70M) The projected unsupportable time is severe for M01O due to contention with CAS, GBRA, GSSR Asteroid 1992UY4 observations, VGR1 MAGROL and the impact of the DSS-43 downtime in week 31.

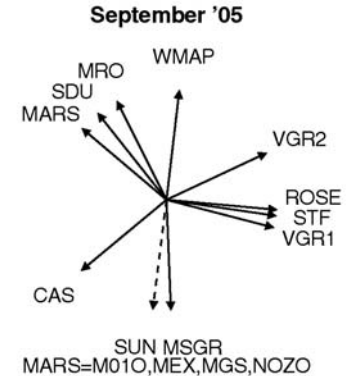
Contention levels on the 34HEF, 34BWG1, 34BWG2, 34HSB, and 26M subnets are workable and should resolve during final schedule preparation and negotiations.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2005 – September (Weeks 35 - 39)



EVENTS

DSS-43 approved downtime (antenna controller replacement, hydrostatic bearing, microwave subsystem controller) ending in week 36

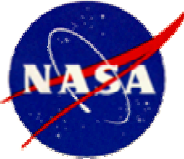
DSS-43 proposed downtime (antenna controller replacement, hydrostatic bearing, microwave subsystem controller) beginning in week 37

Cassini tour

Mars Reconnaissance Orbiter post launch support in weeks 35 and 36

SOHO HSO continuous support ending in week 38

Voyager 2 DTR P/B in week 36, DOY 250



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2005 – September (Weeks 35 - 39) (continued)

RECOMMENDATIONS

Approve DSS-43 downtime in weeks 37 – 39.

GBRA move M-wave spectroscopy and new proposals from 70M to DSS-14,63 in weeks 38 and 39.

☺ M01O move mapping from 70M to DSS-14,63 in weeks 37 – 39.

MEGA delete astrometry support in week 37.

☺ MEX move bi-static radar from DSS-43 to DSS-63 in weeks 37 – 39.

☺ STF move from 70M to DSS-14,63 in weeks 37 – 39.

☺ VGR2 change U/L support in weeks 37 – 39 to DSS-34 and delete ASCAL and MAGROL support in week 37.

WMAP move from 70M to DSS-14,63 in weeks 37 – 39.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

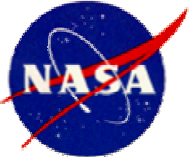
2005 – September (Weeks 35 - 39) (continued)



ANALYSES

(70M) DSS-43 downtime proposal (antenna controller replacement, hydrostatic bearing, microwave subsystem controller) is in contention with GBRA M-wave spectroscopy, GBRA new proposals, M01O mapping, MEGA imagery, MEX bi-static radar, STF, VGR2 routine and U/L, ASCAL, MAGROL and WMAP.

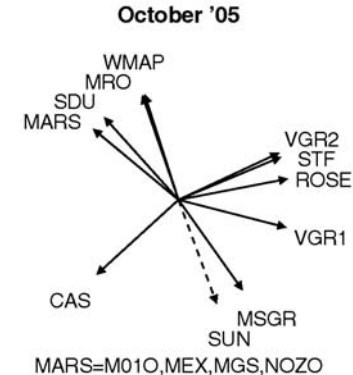
Contention levels on the 34HEF, 34BWG1, 34BWG2, 34HSB, and 26M subnets are workable and should resolve during final schedule preparation and negotiations.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2005 – October (Weeks 40 - 43)



EVENTS

DSS-43 proposed downtime (antenna controller replacement, hydrostatic bearing, microwave subsystem controller)

Cassini tour

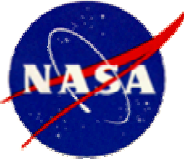
Goldstone Solar System Radar Mars radar speckle displacement (RSD) at DSS-63/Arecibo

Stardust TCM support in weeks 42 and 43

Voyager 1 DTR array P/B at DSS-14/15 in week 43, DOY 299

Wilkinson Microwave Anisotropy Probe maneuver in week 43

Wind TCM in week 42, DOY 287



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2005 – October (Weeks 40 - 43) (continued)

RECOMMENDATIONS

Approve DSS-43 proposed downtime (antenna controller replacement, hydrostatic bearing, microwave subsystem controller) .

☺ Cluster move SSO support from DSS-46/34/45/43 to DSS-46/34/45.

GBRA move M-wave spectroscopy and new proposals support from 70M to DSS-14,63 in weeks 40 – 43 and delete Host Country support in week 42.

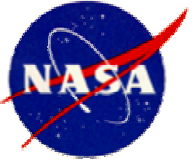
☺ M01O move mapping from 70M to DSS-14,63.

☺ MEX move bi-static radar from DSS-43 to DSS-63.

☺ STF move from 70M to DSS-14,63.

☺ VGR2 change weekly U/L support to DSS-34.

WMAP move routine and maneuver passes from 70M to DSS-14,63.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

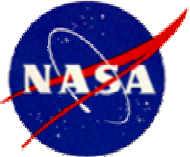
2005 – October (Weeks 40 - 43) (continued)



ANALYSES

(70M) DSS-43 downtime proposal (antenna controller replacement, hydrostatic bearing, microwave subsystem controller) is in contention with Cluster, GBRA Host Country, M-wave spectroscopy, new proposals, M01O mapping, MEX bi-static radar, STF, VGR2 routine and U/L support, and WMAP.

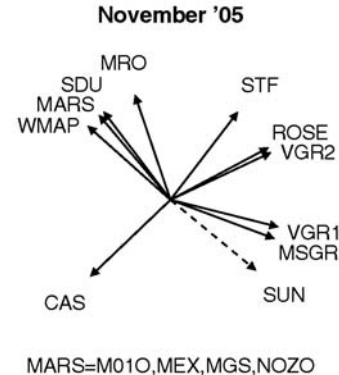
Contention levels on the 34HEF, 34BWG1, 34BWG2, 34HSB, and 26M subnets are workable and should resolve during final schedule preparation and negotiations.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2005 – November (Weeks 44 - 47)



EVENTS

DSS-43 proposed downtime (antenna controller replacement, hydrostatic bearing, microwave subsystem controller)

Cassini tour

Goldstone Solar System Radar Mars radar speckle displacement (RSD) at DSS-63/Arecibo

Ground Based Radio Astronomy RA500 SOC-M4 24-hour quarterly epoch at DSS-14\63 in week 44

Hayabusa asteroid departure in week 46, DOY 319

Mars Reconnaissance Orbiter TCM in weeks 44 and 45

Stardust TCM support in week 46

STEREO Ahead launch in week 46, DOY 319, launch support in weeks 46 and 47, and maneuver in week 47

STEREO Behind launch in week 46, DOY 319, launch support in weeks 46 and 47, and maneuver in week 47

Voyager 1 ASCAL in week 44, DOY 305 and MAGROL in week 44, DOY 308



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2005 – November (Weeks 44 - 47) (continued)

RECOMMENDATIONS

Approve DSS-43 proposed downtime (antenna controller replacement, hydrostatic bearing, microwave subsystem controller).

☺ Cluster move SSO from DSS-46/34/45/43 to DSS-46/34/45 in weeks 44 – 47 and move MSO from DSS-46/34/45/43 to DSS-46/34/45 in week 44.

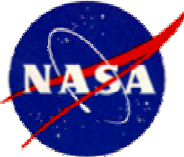
☺ DSS move DSS-14 bearing maintenance from Tuesday to Wednesday in week 44.

EVN reduce E500 J-M4 support from 16 hours to 9 hours in week 46.

GBRA move M-wave spectroscopy and new proposals support from 70M to DSS-14,63 in weeks 44 – 47, delete GBRA RA500 observation in week 45 and delete one 9-hour M-wave spectroscopy support in week 47.

GSSR change 2 Mars observations to MSPA DSS-14 portion with M01O and MGS

M01O reduce 7 passes from 10 hours to 7 hours and move support from 70M to DSS-14. Change request in week 46 to a three-way MSPA two passes with MGS and GSSR Mars and two-way five passes with MEX.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2005 – November (Weeks 44 - 47) (continued)

RECOMMENDATIONS (continued)

MEX move the bi-static radar pass from DSS-43 to DSS-63 in week 44 and 45. In week 46, increase five passes from 6 hours to 7 hours and MSPA with M01O at DSS-14 and delete the two remaining passes. In week 47 reduce orbital science and occultation support from 10.9-hour passes to 8-hour passes.

MGS reduce 70M request from one 10-hour standalone mapping and beta supplement pass and one 10-hour MSPA pass with M01O to two 7-hour MSPA passes with M01O at DSS-14 in week 46.

☺ **STB** move phasing support from DSS-26,43,54 to DSS-26,34,54 in week 47.

☺ **STF** move from 70M to DSS-14,63 in weeks 44 and 45.

☺ **VGR2** change weekly U/L support to DSS-34.

WMAP move from 70M to DSS-14,63.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

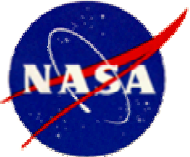
2005 – November (Weeks 44 - 47) (continued)



ANALYSES

(70M) DSS-43 downtime proposal (antenna controller replacement, hydrostatic bearing, microwave subsystem controller) is in contention with Cluster, GBRA M-wave spectroscopy and new proposals, M01O mapping, MEX bi-static radar, MGS, STB, STF, VGR2 routine U/L support and WMAP. Maintenance has contention with VGR1 ASCAL support in week 44. EVN is in contention with M01O, MEX orbital science, occultation and bi-static radar support, NOZO and CAS in weeks 46 - 47.

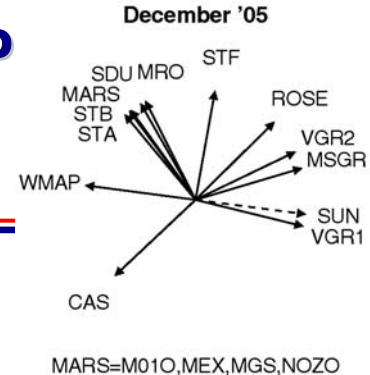
Contention levels on the 34HEF, 34BWG1, 34BWG2, 34HSB, and 26M subnets are workable and should resolve during final schedule preparation and negotiations.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2005 – December (Weeks 48 - 52)



EVENTS

DSS-43 proposed downtime (antenna controller replacement, hydrostatic bearing, microwave subsystem controller) ending in week 52

Cassini tour

Goldstone Solar System Radar Mars radar speckle displacement (RSD) at DSS-63/Arecibo ending in week 48

Mars Express occultation in weeks 48 - 51

Mars Reconnaissance Orbiter TCM in weeks 48 and 49

Stardust TCM in weeks 48 and 52 and Earth entry support beginning in week 52

STEREO Ahead maneuver and phasing support

STEREO Behind maneuver and phasing support



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2005 – December (Weeks 48 - 52) (continued)

RECOMMENDATIONS

Approve DSS-43 downtime.

☺ Cluster move weekly SSO support from DSS-46/34/45/43 to DSS-46/34/45 and move MSO support from DSS-46/34/45/43 to DSS-46/34/45 in week 52.

GBRA move M-wave spectroscopy and new proposals support from 70M to DSS-14,63. In weeks 48, 51 and 52 reduce planetary radio astronomy, Host Country, M-wave spectroscopy and new proposals support from 9 hours to 4.5 hours.

GSSR reduce GODR support from 9 hours to 4 hours in weeks 48 and 52.

M01O move mapping support from 70M to DSS-14,63. In weeks 48, 51 and 52 reduce three of seven 10-hour passes to 7 hours and MSPA the 7 passes with MEX orbital science.

MEGA delete imagery support in week 51.

☺ MEX move bi-static radar from DSS-43 to DSS-63. In weeks 48, 51 and 52 MSPA orbital science activity with M01O and reduce 7 occultation passes from 10.9 hours to 5 hours.

☺ STB move phasing support from DSS-26,43,54 to DSS-26,34,54 in week 48 and move maneuver support from DSS-26,43,54 to DSS-26,34,54 in week 49 and 52. (1)



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2005 – December (Weeks 48 - 52) (continued)

RECOMMENDATIONS (continued)

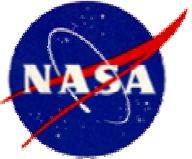
☺ VGR2 change weekly U/L support to DSS-34 and delete the MAGROL at DSS-43 in week 50. (1)

WMAP move from 70M to DSS-14,63. (1)

ANALYSES

(70M) DSS-43 downtime proposal is in contention with Cluster, GBRA M-wave spectroscopy and new proposals, M01O mapping, MEX bi-static radar, MGS, STB, SRTF, VGR2 routine U/L and MAGROL support, and WMAP. Severe to extreme contention exists in the Mars viewperiod due to requirements supporting M01O, MEX and NOZO. Unsupportable time is moderate to severe due to CAS, DSS Maintenance, GBRA, GSSR, SRTF and WMAP. The impact of the DSS-43 downtime adds to contention for all 70M users.

Contention levels on the 34HEF, 34BWG1, 34BWG2, 34HSB, and 26M subnets are workable and should resolve during final schedule preparation and negotiations.

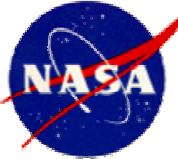


RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses



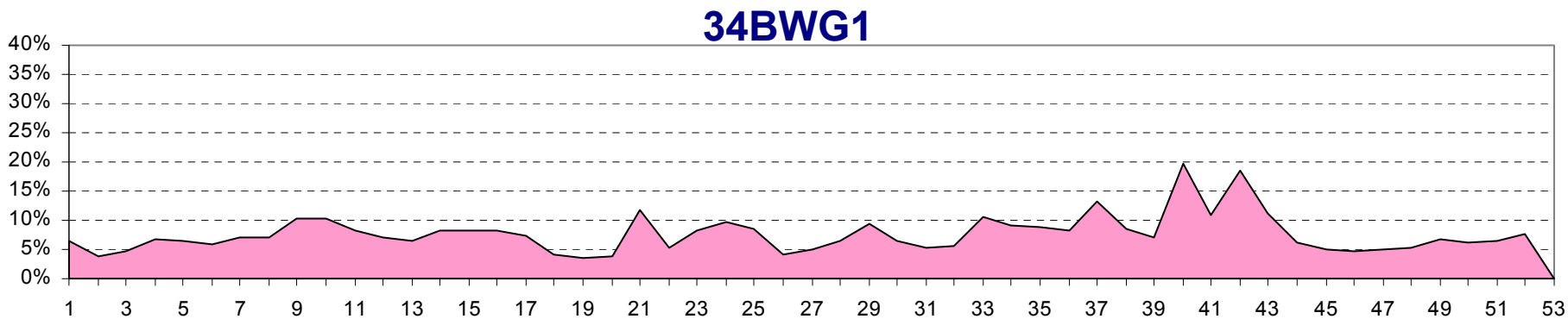
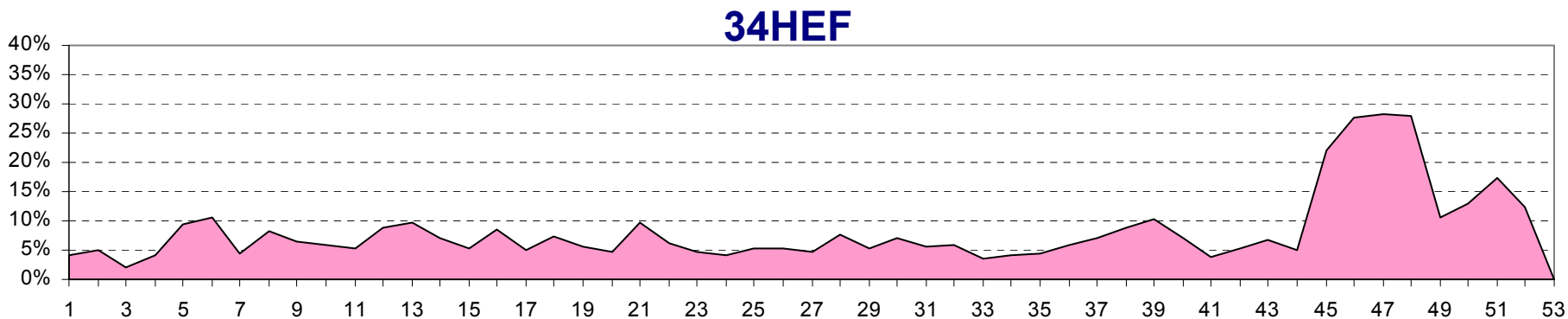
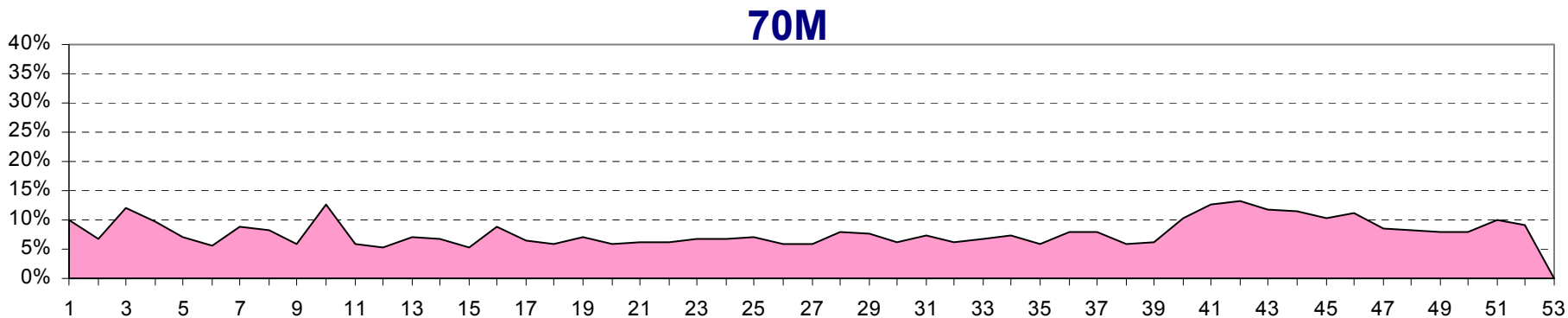
2006 Events, Recommendations and Analyses

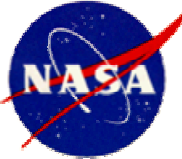


RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2006 Weekly Average User Unsupportable Time





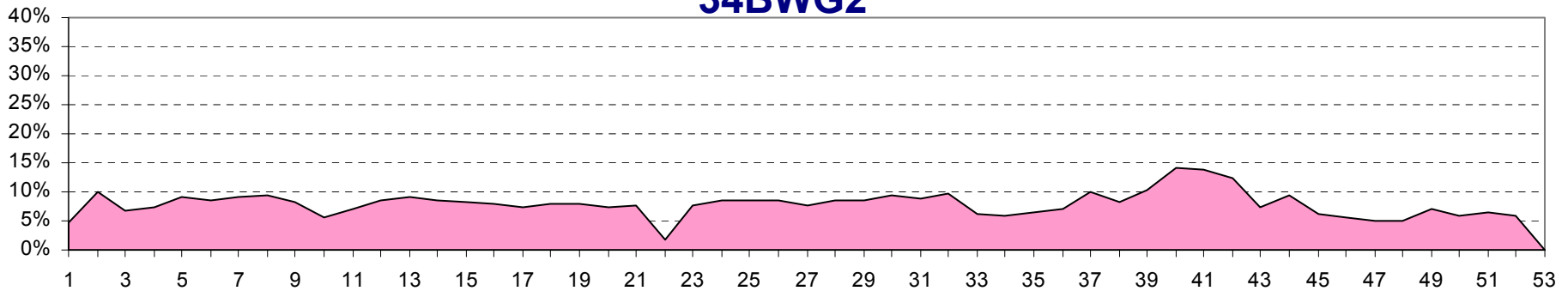
RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

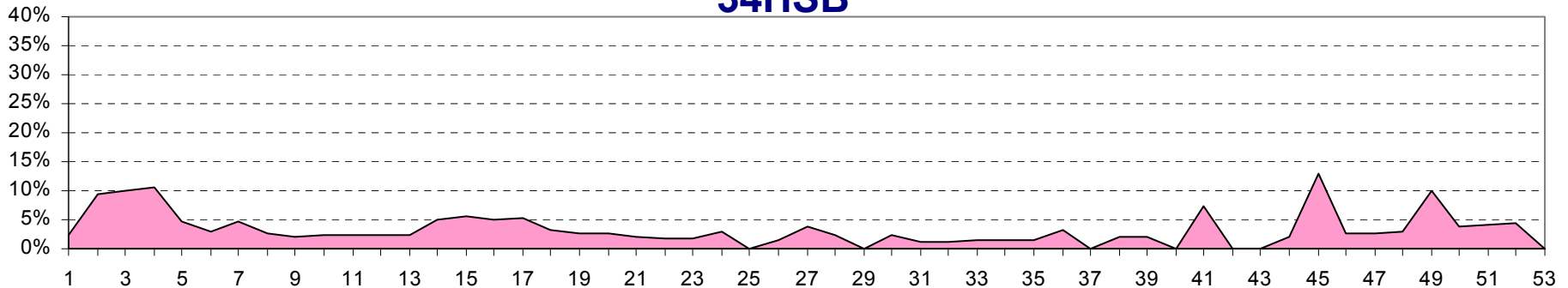


2006 Weekly Average User Unsupportable Time (continued)

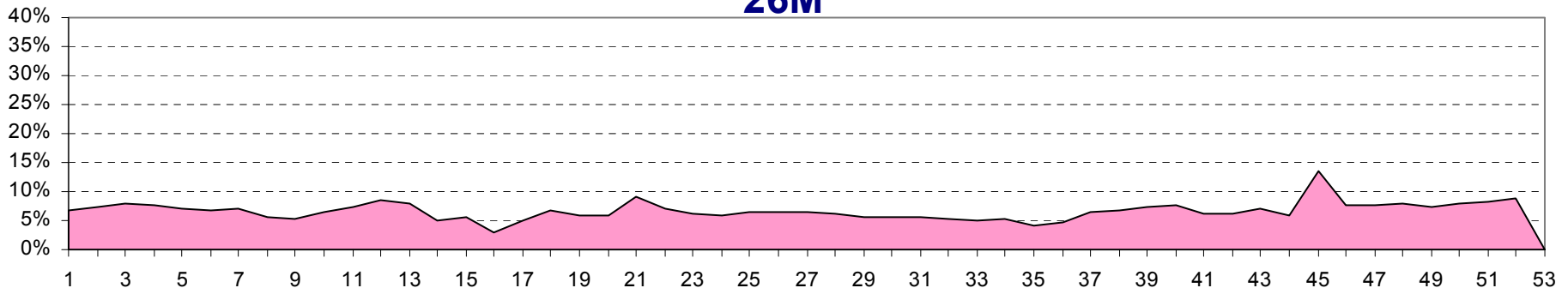
34BWG2

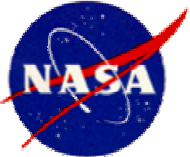


34HSB



26M

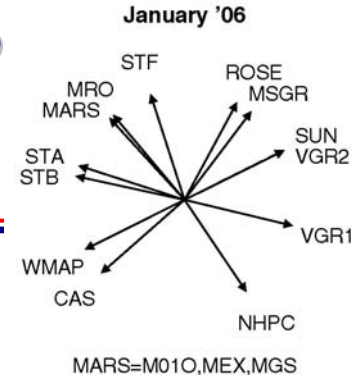




RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2006 – January (Weeks 01 - 04)



EVENTS

Cassini tour

Mars Express orbital science and bi-static radar

Mars Reconnaissance Orbiter approach, Delta-DOR in weeks 02 – 04 and TCM-3 in week 04, DOY 029

Hayabusa TCM-3 beginning in week 04, DOY 023

New Horizons launch and initial acquisition in week 02, DOY 010 and LEOP continuous support in week 02, DOY 011 – 016

Stardust Earth re-entry support in weeks 01 and 02, TCM-19 and recovery on DOY 014, and TCM-20 on DOY 015

STEREO Ahead phasing support and maneuver in weeks 01 and 04, DOY 005 and 027

STEREO Behind phasing support in week 01 and maneuver on DOY 005 and prime science support beginning in week 02, DOY 009

WIND TCM in week 01 on DOY 008



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2006 – January (Weeks 01 - 04) (continued)

RECOMMENDATIONS

☺ DSN reduce antenna calibration time from 9 hours to 4.5 hours on the 70M subnets.

GBRA change week 04 DSS-43 Host Country 24-hour event to three 8-hour supports and move 1 support each to weeks 02 – 04, reduce DSS-63 Host Country support from 8 hours to 6 hours in weeks 01 – 04, reduce week 01 VLBA SOC-M4 support at DSS-14\63 from 10 hours to 8 hours, reduce M-wave spectroscopy, planet R/AST, and new proposals support from 9 hours to 6 hours.

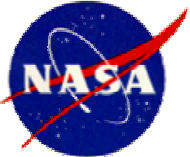
☺ M01O MSPA 4 passes per week with MGS.

☺ MGS MSPA 4 passes per week with M01O.

ANALYSES

(70M) The projected unsupportable time for DSS maintenance in weeks 01 and 02 is moderate due to 50 percent viewperiod overlap with M01O mapping, MGS mapping, MEX bi-static radar support, and VGR2.

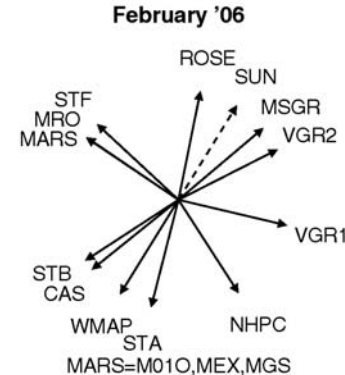
Contention levels on the 34HEF, 34BWG1, 34BWG2, 34HSB, and 26M subnets are workable and should resolve during final schedule preparation and negotiations.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2006 – February (Weeks 05 - 08)



EVENTS

Cassini tour

European VLBI Network E500 J-M4 quarterly epoch at DSS-14\63 in week 08

Ground Base Radio Astronomy RA500 SOC-M4 24-hour quarterly epoch at DSS-14\63 in week 07

Mars Reconnaissance Orbiter approach, Delta-DOR, and TCM-3 in week 05

Hayabusa TCM-3 in weeks 05 – 07

New Horizons LEOP

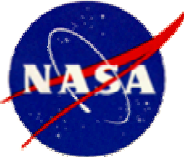
SOHO HSO continuous support

STEREO Ahead phasing support ending in week 07 and prime science support beginning in week 07

STEREO Behind prime science

Voyager 1 MAGROL maneuver in week 05, DOY 034

Wilkinson Microwave Anisotropy Probe maneuver in week 07



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2006 – February (Weeks 05 - 08) (continued)

RECOMMENDATIONS

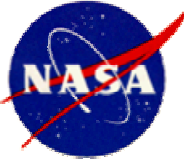
GBRA reduce new proposals from 9 hours to 4 hours in weeks 05 – 08, reduce week 06 VLBA SOC-M4 support from 10 hours to 8 hours, and change DSS-14\63 RA500 SOC-M4 24-hour support to three 8-hour supports in week 07. (1)

☺ M01O MSPA 4 passes per week with MGS on the 70M. (1)

☺ MEX move support from DSS-24,54 to 70M and MSPA one to two 6-hour passes with MGS in weeks 05 and 06. (3, 4)

☺ MGS MSPA 4 passes per week with M01O on the 70M. In weeks 05 and 06, move 1 to 2 passes per week from the 70M,34BWG2 to the 70M and MSPA with MEX one 6-hour pass in week 05 and two 6-hour passes in week 06. Add one 4-hour pass in week 05 and two 4-hour passes in week 06 on the 34BWG1 subnet. (1, 4)

SGP delete support at DSS-15 in week 06. (2)



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

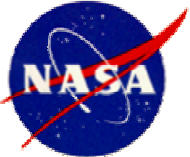
2006 – February (Weeks 05 - 08) (continued)



ANALYSES

1. (70M) The projected unsupportable time for DSS bearing maintenance is moderate due to viewperiod overlap with M01O mapping, MGS mapping, MEX bi-static radar, VGR2, and GBRA 9 to 24-hour activities in week 05, 07, and 08.
2. (34HEF) The projected unsupportable time is severe for SGP crustal dynamics 24-hour event at DSS-15 and moderate for Cluster SSO support, RFC CAT M&E 24-hour simultaneous support, and VGR2 routine support in week 06.
3. (34BWG1) The projected unsupportable time is moderate for DSS routine maintenance, Wind, and VGR2 routine support due to viewperiod overlap in the Sun view.
4. (34BWG2) The projected unsupportable time is moderate for MGS mapping and VGR1 due to viewperiod overlap.

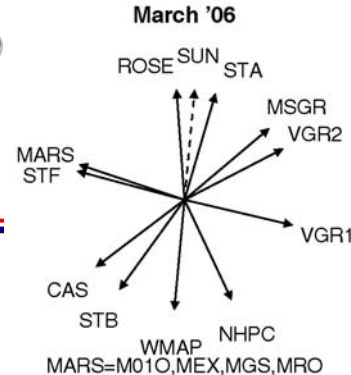
Contention levels on the 34HSB and the 26M subnets are workable and should resolve during final schedule preparation and negotiations.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2006 – March (Weeks 09 - 13)



EVENTS

Cassini tour

Mars Reconnaissance Orbiter approach and TCM-4 in week 09, DOY 059, TCM-5 and MOI in week 10, DOY 068 and 069, and aerobraking beginning in week 11

MESSENGER Venus flyby beginning in week 09, DOY 058

SOHO HSO continuous support

STEREO Ahead prime science and Sun Earth Connection Coronal and Hemispheric Investigation (SECCHI) campaign beginning in week 11

STEREO Behind prime science and SECCHI campaign beginning in week 11

Voyager 2 DTR P/B at DSS-43 in week 10, DOY 067 and ASCAL and MAGROL maneuvers in week 11, on DOY 072 and 075 at DSS-43



RESOURCE ALLOCATION REVIEW BOARD

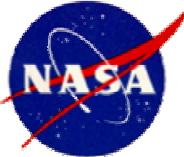
Events, Recommendations and Analyses

2006 – March (Weeks 09 - 13) (continued)



RECOMMENDATIONS

- ☺ Cluster change SSO support antennas from DSS-16/27/24/15 to DSS-16/27/24/14 in weeks 10 and 11. (2)
- ☺ DSS change week 10 DSS-43 routine maintenance to bearing maintenance. Change week 11 DSS-43 bearing maintenance to routine maintenance and reduce support from 8 hours to 6 hours. (1)
- GBRA reduce M-wave spectroscopy, planet R/AST, and new proposals from 9 hours to 6 hours in weeks 10 and 11. Reduce VLBA SOC-M4 support from 10 hours to 8 hours and move from week 10 to week 09. (1)
- ☺ M01O MSPA 4 passes with MGS on the 70M in weeks 09, 12, and 13. (1)
- ☺ MGS MSPA 4 passes with M01O on the 70M in weeks 09, 12, and 13 and move 5 passes in week 10 and 3 passes in week 11 to the 34BWG2. (1)
- SGP crustal dynamics move support from week 10 to week 11. (2)
- ☺ STA move 7 week 09 prime science passes and 5 week 10 passes from DSS-26,34,55 to DSS-26,45,55 and move SECCHI campaign passes from DSS-15,34,55 to DSS-25,45,65 in week 12 and 13. (2)



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

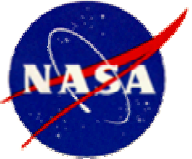
2006 – March (Weeks 09 - 13) (continued)



ANALYSES

1. (70M) The projected unsupportable time is moderate for DSS bearing maintenance, MRO MOI, M01O mapping, MGS mapping and VGR2 ASCAL due to over subscription in the Mars viewperiod and Mars viewperiod overlap with maintenance and VGR2 in weeks 10 and 11.
2. (34HEF) The projected unsupportable time for DSS Maintenance, SGP crustal dynamics 24-hour event, and STA SECCHI campaign is moderate due to viewperiod overlap in the Sun view and 24-hour events for RFC CAT M&E simultaneous 24-hour supports and SGP events in weeks 10, 12, and 13.

Contention levels on the 34BWG1, 34BWG2, 34HSB, and 26M subnets are workable and should resolve during final schedule preparation and negotiations.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2006 – April (Weeks 14 - 17)

EVENTS

Cassini tour

Mars Reconnaissance Orbiter aerobraking

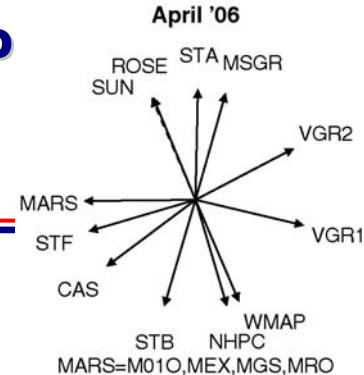
SOHO HSO continuous support

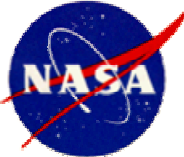
STEREO Ahead prime science and SECCHI campaign ending in week 15

STEREO Behind prime science and SECCHI campaign ending in week 15

Voyager 1 DTR array P/B at DSS-14/15 in week 17, DOY 117

WIND TCM in week 14, DOY 095





RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2006 – April (Weeks 14 - 17) (continued)

RECOMMENDATIONS

GBRA change week 16 Host Country 24-hour support at DSS-43 to three 8-hour supports. Reduce M-wave spectroscopy, planet R/AST, and new proposals from 9 hours to 6 hours. Move week 14 VLBA SOC-M4 support to week 15 and reduce support from 10 hours to 8 hours. (1)

M01O increase 70M MSPA passes with MGS from three to seven and increase durations from 10 hours to 11 hours, reduce 2 passes from 10 hours to 7 hours, and move to DSS-14,63. (1)

MGS increase 70M MSPA passes with M01O from three to seven and increase durations from 10 hours to 11 hours, and reduce 2 passes from 10 hours to 7 hours and move to DSS-14,64. Move remaining 2 to 3 passes to the 34HEF. (1)

MRO move 8 passes in weeks 14 – 16 and 5 passes in week 17 from DSS-15,34,55 to 34HEF,34BWG2. (1, 2, 3)

SGP reduce support from 24 hours to 12 hours in week 16. (2)

☺ ULYS reduce support from 10 hours to 6 hours and move passes from the 34BWG1 to DSS-43,34. (3)



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

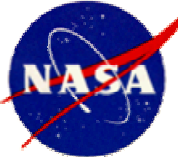
2006 – April (Weeks 14 - 17) (continued)



ANALYSES

1. (70M) The projected unsupportable time in weeks 14, 16, and 17 is moderate to severe for DSS bearing maintenance due to viewperiod overlap with M01O mapping, MGS mapping, MEX bi-static radar, GSSR Mercury support, and VGR1 DTR array P/B in week 17.
2. (34HEF) The projected unsupportable time in weeks 14, 16, and 17 for SGP crustal dynamics 24-hour event, VGR2, and VGR1 DTR array P/B is moderate due to viewperiod overlap with CAS tour, DSS maintenance, MRO aerobraking continuous support, and RFC CAT M&E 24-hour simultaneous support.
3. (34BWG1) The projected unsupportable time in week 14 is extreme for Wind TCM at DSS-24 and moderate for ULYS, VGR2, and Wind routine supports due to viewperiod overlap with DSS maintenance, MGS, STA, STB, MSGR, and NHPC.

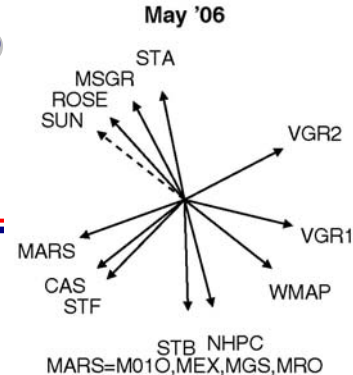
Contention levels on the 34BWG2, 34HSB, and 26M subnets are workable and should resolve during final schedule preparation and negotiations.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2006 – May (Weeks 18 - 21)



EVENTS

**DSS-63 proposed downtime (antenna controller replacement)
beginning in week 21**

Cassini tour

Dawn launch and initial acquisition in week 21, DOY 147

**Ground Base Radio Astronomy RA500 SOC-M4 24-hour quarterly epoch at DSS-14\63
in week 21**

Mars Reconnaissance Orbiter aerobraking

STEREO Ahead prime science

STEREO Behind prime science

Voyager 1 ASCAL and MAGROL maneuvers in week 17 on DOY 122 and 125



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2006 – May (Weeks 18 - 21) (continued)



RECOMMENDATIONS

Approve DSS-63 downtime.

CAS delete tour array support at DSS-63/65 and use DSS-14/25 and remove DSS-15 and DSS-65 from the antenna requirement for tour passes in week 21. (1, 2)

☺ DSS reduce 1 DSS-14 routine maintenance from 8 hours to 6 hours in week 21. (1)

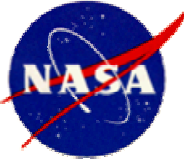
GBRA delete Host Country at DSS-63 in week 21, move M-wave spectroscopy and new proposals from 70M to DSS-14,43, delete DSS-14\63 RA500 SOC-M4 array and use DSS-14. (1)

☺ M01O move four 70M mapping passes to DSS-14,43 and MSPA with MGS in week 21. (1)

☺ MGS move four 70M,34BWG1 mapping passes to DSS-14,43 and MSPA with M01O. Use split passes of 5 hours each for 5 standalone passes at DSS-14,43,65 and 5 passes on the DSS-45,34BWG2 in week 21. (1, 2, 3)

☺ SOHO reduce TSO support from 5 days to 4 days and move all passes to the 26M in week 21. (2, 3)

☺ STF move week 21 passes from 70M to DSS-14,43. (1)



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2006 – May (Weeks 18 - 21) (continued)



RECOMMENDATIONS (continued)

☺ ULYS move 34BWG1 passes to DSS-43 and reduce from 10 hours to 4 hours in week 21. (3)

☺ VGR1 move week 21 routine U/L support from DSS-14,63 to DSS-14. (1)

WMAP move week 21 passes from 70M to DSS-14,43. (1)



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

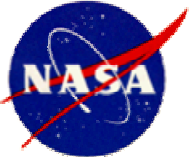
2006 – May (Weeks 18 - 21) (continued)



ANALYSES

1. (70M) DSS-63 proposed downtime for ACR beginning in week 21 is in contention with CAS tour array support, DSN antenna calibration, DSS bearing and routine maintenance, GBRA Host Country, M-wave spectroscopy, new proposals, RA500 SOC-M4, M01O mapping, MGS mapping, STF, VGR2, VGR1 routine U/L, and WMAP routine support. The projected unsupportable time for maintenance, M01O, and MGS is moderate due to impact of the proposed downtime for DSS-63.
2. (34HEF) The projected unsupportable time for Dawn launch and initial acquisition is moderate due to view period overlap with MSGR, SOHO TSO continuous, STA, STB, ULYS, and VGR2.
3. (34BWG1) The projected unsupportable time for Dawn launch and initial acquisition is moderate due to view period overlap with MSGR, SOHO TSO continuous, STA, STB, ULYS, VGR2, and Wind.

Contention levels on the 34BWG2, 34HSB, and 26M subnets are workable and should resolve during final schedule preparation and negotiations.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2006 – June (Weeks 22 - 26)

EVENTS

DSS-63 proposed downtime (antenna controller replacement)

Cassini tour

Dawn launch support through week 24

EVN E500 J-M4 24 hour quarterly epoch at DSS-14\63 in week 22

Mars Reconnaissance Orbiter aerobraking continuous support

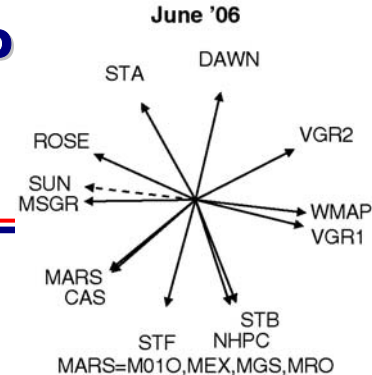
RadioAstron start of DSN support on the 70M in week 24

STEREO Ahead prime science

STEREO Behind prime science

Voyager 2 MAGROL maneuver at DSS-43 in week 24, DOY 167

Wilkinson Microwave Anisotropy Probe maneuver in week 23





RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2006 – June (Weeks 22 - 26) (continued)



RECOMMENDATIONS

Approve DSS-63 downtime.

☺ CAS move week 22 passes from DSS-15,24,26,54,55,65 to DSS-24,26,55 (2, 3)

☺ DSS delete 1 of 2 DSS-14 routine maintenance support in week 25. (1)

EVN delete DSS-63 calibration and DSS-14\63 array supports in weeks 22 and 23. (1)

GBRA reduce M-wave spectroscopy and new proposals support from 9 hours to 6 hours.
Reduce planet R/AST supports from 9 hours to 4 hours. Delete DSS-14\63 VLBA array, reduce support from 10 hours to 8 hours, and use DSS-14. (1)

GSSR reduce support from 5.2 hours to 4 hours, move 1 Mercury support from week 24 to week 25, and delete one of two supports in week 26. Reduce GODR supports from 8 hours to 4 hours in weeks 24 and 26. (1,2)

M01O MSPA all seven passes with MGS, move 4 to 5 passes to DSS-14, and increase pass duration from 10 hours to 12 hours. Move remaining two to three passes to DSS-43, reduce duration from 10 hours to 9 hours and MSPA with MGS. (1)



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2006 – June (Weeks 22 - 26) (continued)

RECOMMENDATIONS (continued)

MGS move four to five passes from 34BWG1 in week 22 and four to five passes from 70M,34BWG1 in weeks 23 – 26 to DSS-14, increase pass duration from 10 hours to 12 hours, and MSPA with M01O. Move two to three passes from 70M,34BWG1 to DSS-43, reduce pass duration from 10 hours to 9 hours, and MSPA with M01O. Move remaining two to three standalone 70M,34BWG1 passes to 34BWG1. (1, 2)

MRO move two to four 70M passes to DSS-43 and move two passes to the 34HEF in week 22. Move four to five passes from 34BWG1,34BWG2 to the 34BWG1. Move three to four passes per week from DSS-15,45,55 to the 34HEF. (1, 2, 3)

SGP delete DSS-45 support in week 22. (2)

☺ **STF** move passes from the 70M to DSS-14,43. (1)

☺ **ULYS** reduce passes from 10 hours to 6 hours and move from 70M to DSS-34 in week 22, reduce all passes in weeks 23 – 26 from 10 hours to 6 hours, move passes in weeks 23 – 25 and two passes in week 26 to DSS-43,34, and move remaining 2 passes in week 26 to DSS-34. (1, 2)

☺ **VGR1** move routine U/L support from DSS-14,63 to DSS-14. (1)

WMAP move routine and maneuver passes from the 70M to DSS-14,43. (1)



RESOURCE ALLOCATION REVIEW BOARD

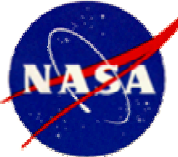
Events, Recommendations and Analyses

2006 – June (Weeks 22 - 26) (continued)

ANALYSES

- 1. (70M) proposed DSS-63 downtime for ACR is in contention with DSN antenna calibration, DSS bearing and routine maintenance, EVN simultaneous quarterly epoch at DSS-14\63, GBRA Host Country, M-wave spectroscopy, new proposals, and VLBA SOC-M4 at DSS-14\63, M01O mapping, MGS mapping, STF routine support, ULYS routine support, VGR1 routine U/L support, and WMAP routine support. The projected unsupportable time for DSS-14 and DSS-43 routine and bearing maintenance is moderate to severe due to viewperiod overlap with Mars Missions and impact of the proposed downtime for DSS-63.**
- 2. (34HEF) The projected unsupportable time for DSS Maintenance in weeks 22 and 25 is moderate to severe due to RFC CAT M&E 24-hour simultaneous support, SGP crustal dynamics 24-hour supports, viewperiod overlap with MRO aerobraking continuous support, SOHO TSO, and impact of the proposed downtime for DSS-63.**
- 3. (34BWG2) The projected unsupportable time for DSS Maintenance in weeks 23 – 25 is moderate due to viewperiod overlap with MRO aerobraking continuous support, and impact of the proposed downtime for DSS-63.**

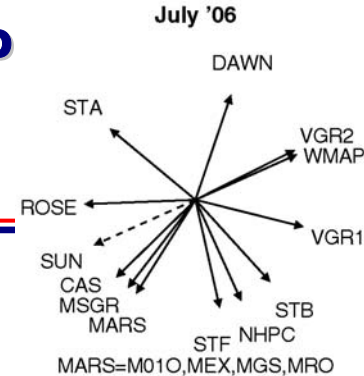
Contention levels on the 34BWG1, 34HSB, and 26M subnets are workable and should resolve during final schedule preparation and negotiations.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2006 – July (Weeks 27 - 30)



EVENTS

DSS-63 downtime proposal (antenna controller replacement)

Cassini tour

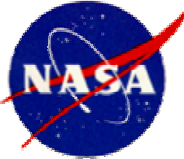
Hayabusa TCM-4 support in weeks 28 – 30

Mars Reconnaissance Orbiter aerobraking continuous support

STEREO Ahead prime science

STEREO Behind prime science

WIND TCM in week 27, DOY 186



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2006 – July (Weeks 27 - 30) (continued)



RECOMMENDATIONS

Approve DSS-63 downtime.

CAS move tour array passes from DSS-63/65 to DSS-14/25 and remove DSS-15 and DSS-65 antenna requirement for routine tour support. (1, 2)

☺ DSN delete week 25 antenna calibration support at DSS-63 and reduce all remaining 70M supports from 8 hours to 4.5 hours. (1)

☺ DSS reduce DSS-14 routine maintenance from two 8-hour supports per week to one 8-hour support per week during DSS-63 downtime for ACR. (1)

GBRA delete DSS-63 Host country and change week 29 DSS-43 Host Country from 24 hours to three 8-hour supports. Move M-wave spectroscopy and new proposals from the 70M to DSS-14,43 and reduce support from 9 hours to 6 hours and reduce planet R/AST support from 9 hours to 4 hours. Move week 27 VLBA SOC-M4 array support from DSS-14\63 to DSS-14 and reduce support from 10 hours to 8 hours. (1)

GSSR reduce Mercury support from 5.2 hours to 4 hours in weeks 27 and 30 and move week 27 support to week 28. (1, 2)



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2006 – July (Weeks 27 - 30) (continued)



RECOMMENDATIONS (continued)

M01O move four to five 70M passes per week to DSS-14, increase pass duration from 10 hours to 12 hours and MSPA with MGS. Move two to three 70M passes to DSS-43, reduce pass duration from 10 hours to 9 hours and MSPA with MGS. (1)

MGS move four to five 70M,34BWG1 passes per week to DSS-14, increase pass duration from 10 hours to 12 hours and MSPA with M01O. Move two to three 70M,34BWG1 passes to DSS-43, reduce pass duration from 10 hours to 9 hours and MSPA with M01O. Move remaining two to three standalone 70M,34BWG1 passes to DSS-43 and reduce pass duration from 10 hours to 9 hours. (1, 2, 3)

MRO MSPA 2 to 3 passes with MGS and move 3 passes from the 34HEF to DSS-26,34,55. (1, 2, 3)

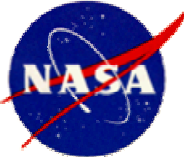
RADA move passes from the 70M to DSS-14,43. (1)

RFC delete CAT M&E supports. (2)

SGP delete support in weeks 28 and 30. (2)

☺ STF move supports from the 70M to DSS-14,43. (1)

WMAP move 70M routine supports from the 70M to DSS-14,43. (1)



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

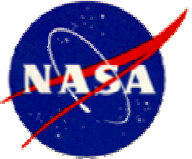
2006 – July (Weeks 27 - 30) (continued)



ANALYSES

- 1. (70M) DSS-63 proposed downtime for ACR is in contention with CAS, DSN antenna calibration, DSS bearing and routine maintenance, GBRA Host Country, M-wave spectroscopy, new proposals, VLBA SOC-M4 at DSS-14/63, M01O mapping, MGS mapping, STF, ULYS, VGR1 U/L, and WMAP routine support. The projected unsupportable time for CAS, DSS-14 and DSS-43 routine and bearing maintenance, M01O and MGS mapping, and MEX bi-static radar, is moderate to severe due to viewperiod overlap with DSS maintenance, over subscription in the Mars view, and impact of the proposed downtime for DSS-63 ACR.**
- 2. (34HEF) The projected unsupportable time for GSSR GODR in week 30 and SGP crustal dynamics in weeks 28 and 30 is moderate due to MRO continuous, RFC calibration 24-hour simultaneous support, SGP crustal dynamics 24-hour supports, viewperiod overlap in the Sun view, and impact of the proposed downtime for DSS-63 ACR.**
- 3. (34BWG1) The projected unsupportable time for Wind TCM in week 27 is severe due to viewperiod overlap in the Sun view with DSS maintenance, MSGR, NHPC, STA and STB, ULYS, and VGR2.**

Contention levels on the 34BWG2, 34HSB and 26M subnets are workable and should resolve during final schedule preparation and negotiations.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2006 – August (Weeks 31 - 35)

EVENTS

DSS-63 downtime proposal (antenna controller replacement)

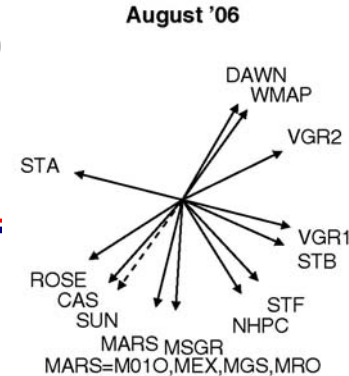
Cassini tour

Mars Reconnaissance Orbiter aerobraking continuous support

STEREO Ahead prime science

STEREO Behind prime science

Voyager 1 MAGROL maneuver in week 31, DOY 217





RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2006 – August (Weeks 31 - 35) (continued)

RECOMMENDATIONS

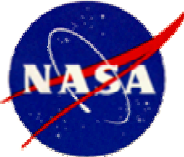
Approve the DSS-63 downtime ending in week 35.

- ☺ CAS remove DSS-15 and DSS-65 antenna requirement from routine tour support. (2)
- ☺ DSN delete DSS-63 antenna calibration and reduce all remaining supports from 8 hours to 4.5 hours. (1, 2, 3, 4)
- ☺ DSS reduce DSS-14 routine maintenance from two 8-hour supports per week to one 8-hour and one 6-hour support per week. (1)

GBRA delete DSS-63 Host Country, move all M-wave spectroscopy from the 70M to DSS-14,43, reduce support from 9 hours to 6 hours, and delete 1 support in weeks 31, 32, 34, and 35. Reduce new proposals support from 9 hours to 6 hours and move support from the 70M to DSS-14,43. Reduce planet R/AST support from 9 hours to 4 hours. Move week 32 VLBA SOC-M4 support to week 33, change DSS-14\63 to DSS-14, and reduce support from 10 hours to 8 hours. (1)

GSSR move Mercury support from weeks 31 to week 32 and from week 33 to week 35. (1)

M01O increase 70M MSPA passes with MGS from three to six. Move three 70M MSPA passes per week with MGS to DSS-14. Change one standalone pass per week to MSPA with MGS and move to DSS-14. Move two passes from the 70M to DSS-43, reduce pass duration from 10 hours to 8 hours and MSPA with MGS. (1)



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2006 – August (Weeks 31 - 35) (continued)



RECOMMENDATIONS (continued)

MEGA change 24-hour imagery support to three 8-hour supports in week 34. (1)

MGS increase 70M MSPA passes with M01O from three passes per week to six passes per week. Move three 70M MSPA passes to DSS-14. Move one standalone pass from 70M,34BWG1 to DSS-14 and MSPA with M01O. Move two 70M,34BWG1 passes to DSS-43, reduce pass duration from 10 hours to 8 hours, and MSPA with M01O. Move remaining three to four passes from 70M,34BWG1 to DSS-43,26,55. (1, 2, 3)

RADA move support from the 70M to DSS-14,43. (1)

☺ STF move supports from the 70M to DSS-14,43. (1)

☺ ULYS move 70M support to the 34BWG1 and reduce supports from 10 hours to 6 hours in week 33. Reduce weeks 34 and 35 support from 10 hours to 6 hours. (3)

☺ VGR1 delete 4-hour supports at DSS-14,63, move 70M routine U/L passes from DSS-14,63 to DSS-14, delete weeks 31 – 35 supports at DSS-15,65,54,24,14,63, and add six 6-hour supports at DSS-24,54,15,65 in weeks 32 – 35. (1, 2, 3)

WMAP move 70M routine supports from the 70M to DSS-14,43. (1)



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2006 – August (Weeks 31 - 35) (continued)

ANALYSES

1. (70M) proposed DSS-63 downtime for ACR is in contention with DSN antenna calibration, DSS bearing and routine maintenance, GBRA M-wave spectroscopy, new proposals, and VLBA SOC-M4 at DSS-14\63, M01O mapping, MGS mapping, STF routine support, ULYS routine support, VGR1 routine U/L support, and WMAP routine support. The projected unsupportable time DSS-14 and DSS-43 routine and bearing maintenance, M01O mapping, MGS mapping, ULYS, and VGR2 is moderate to severe due to viewperiod overlap in the Mars and sun view and the impact of the proposed downtime for DSS-63 ACR.
2. (34HEF) The projected unsupportable time for DSS maintenance is moderate due to RFC CAT M&E 24-hour simultaneous support, SGP crustal dynamics 24-hour support, viewperiod overlap with CAS, MRO aerobraking, and DSS Maintenance and impact of the proposed downtime for DSS-63 ACR.
3. (34BWG1) The projected unsupportable time for DSS maintenance is moderate to severe due to viewperiod overlap in the Sun view with MGS mapping, MSGR, NHPC, SOHO TSO, STA, STB, ULYS, VGR1, and Wind in weeks 33 – 35, and impact of the proposed downtime for DSS-63 ACR.
4. (34BWG2) The projected unsupportable time for DSS maintenance is moderate due to viewperiod overlap in the Sun view with MGS mapping, MSGR, STA, STB, VGR1 and impact of the proposed downtime for DSS-63 ACR.



RESOURCE ALLOCATION REVIEW BOARD

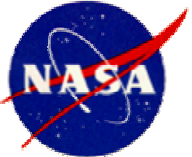
Events, Recommendations and Analyses

2006 – August (Weeks 31 - 35) (continued)



ANALYSES (continued)

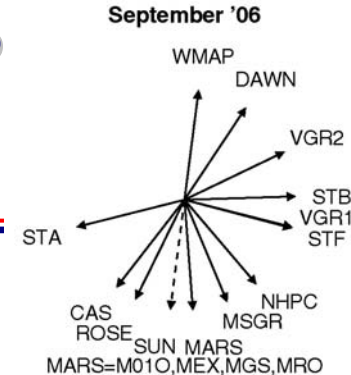
Contention levels on the 34HSB and 26M subnets are workable and should resolve during final schedule preparation and negotiations.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2006 – September (Weeks 36 - 39)



EVENTS

DSS-24 approved downtime (X/X-Ka band installation)

Cassini tour

Mars Reconnaissance Orbiter aerobraking ending in week 37, DOY 256 and transition to prime science in week 37, DOY 257

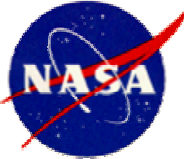
Rosetta (Mars gravity assist) Mars swingby beginning in week 36

STEREO Ahead prime science

STEREO Behind prime science

Voyager 2 DTR P/B at DSS-43 in week 36, DOY 249, ASCAL and MAGROL maneuvers at DSS-43 in week 37, DOY 255 and 258

Wilkinson Microwave Anisotropy Probe EOEM in week 39, DOY 274



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2006 – September (Weeks 36 - 39) (continued)

RECOMMENDATIONS

☺ CAS remove DSS-15 and DSS-65 antenna requirement from routine tour support. (2)

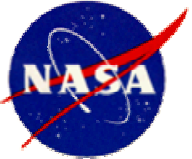
GBRA reduce M-wave spectroscopy, new proposals, and planet R/AST from 9 hours to 6 hours and reduce week 36 VLBA SOC-M4 DSS-14\63 simultaneous support from 10 hours to 8 hours. (1)

M01O increase MSPA 10-hour mapping passes with MGS from three to five. (1, 2, 3)

MGS increase MSPA mapping passes with M01O from three to five. Delete all 34HEF,34BWG2 5-hour standalone mapping passes. Move remaining four to five passes from 70M,34BWG1 to the 70M and use full view at DSS-14 and DSS-63. (1, 2, 3, 4)

RFC CAT M&E delete support in week 36. (1)

SGP delete support in weeks 36, 38, and 39. (1)



RESOURCE ALLOCATION REVIEW BOARD

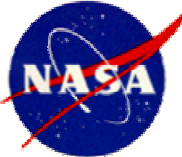
Events, Recommendations and Analyses

2006 – September (Weeks 36 - 39) (continued)

ANALYSES

1. (70M) The projected unsupportable time for DSS routine maintenance and bearing maintenance is moderate to severe due to viewperiod overlap of the Mars viewperiod with DSS maintenance, CAS, and requirements for RADA, ULYS, and VGR2 DTR P/B, ASCAL, and MAGROL in weeks 36 – 38.
2. (34HEF) The projected unsupportable time is moderate for MGS mapping, MRO aerobraking and transition to prime science, RFC CAT M&E, SGP crustal dynamics, and VGR2 is due to view period overlap in the Mars view, CAS, DSS-24 approved downtime for X/X-Ka band installation, and RFC CAT M&E and SGP 24-hour events.
3. (34BWG1) The projected unsupportable time for MGS mapping, MRO aerobraking and transition to prime science, MSGR, SOHO TSO, ULYS, VGR1, and Wind is moderate to severe due to view period overlap in the Mars view, NHPC cruise, STA and STB, and DSS-24 approved downtime for X/X-Ka band installation.
4. (34BWG2) The projected unsupportable time for DSS routine maintenance, MGS mapping, MRO transition to prime science, and VGR1 is moderate due to view period overlap in the Mars view and DSS-24 approved downtime for X/X-Ka band installation.

Contention levels on the 34HSB and 26M subnets are workable and should resolve during final schedule preparation and negotiations.

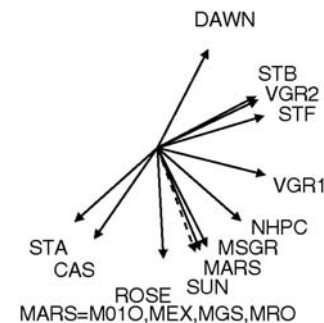


RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2006 – October (Weeks 40 - 43)

October '06



EVENTS

DSS-24 approved downtime (X/X-Ka Band installation)
ending in week 42, DOY 295

Cassini tour

Mars Express R/S solar corona

Mars Reconnaissance Orbiter transition to prime science ending in week 40, DOY 279,
prime science and solar conjunction beginning on DOY 280

Rosetta (Mars gravity assist) Mars swingby and Delta-DOR at DSS14\43

STEREO Ahead prime science

STEREO Behind prime science

Voyager 1 DTR array P/B at DSS-14/15 in week 43, DOY 298 and 299

WIND TCM in week 40, DOY 276



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2006 – October (Weeks 40 - 43) (continued)

RECOMMENDATIONS

☺ DSS delete 1 routine maintenance at DSS-14 and one 6-hour maintenance at DSS-63 each week and reduce DSS-25 and DSS-26 maintenance from 8 hours to 6 hours in weeks 40 – 42. (1, 3)

M01O move three 70M mapping passes to DSS-43, and MSPA with MGS. MSPA one additional pass per week with MEX at DSS-14,63. (1)

MEX MSPA one additional solar corona pass with M01O at DSS-14,63. (1)

MGS move three passes from 34HEF to DSS-43, reduce pass duration from 14 hours to 10 hours, and MSPA with M01O. Reduce remaining six to seven mapping and beta supplement passes planned on 34HEF, DSS-34,54, and 34BWG2 from 10 – 14 hours to 8 hours each. (2, 3)

SGP change 24-hour crustal dynamics at DSS-65 in week 42 and DSS-45 in week 43 to three 8-hour supports. (2, 3)

☺ ULYS reduce 3 to 5 passes planned at DSS-34 from 10 hours to 4 hours. (2)

☺ VGR1 reduce 12 to 14 passes at DSS-26 and DSS-55 from 6 hours to 4 hours. (3)

☺ VGR2 reduce seven passes planned at DSS-43 from 8 hours to 6 hours in weeks 41 and 42. (1)



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

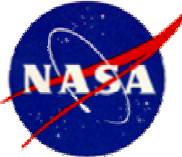
2006 – October (Weeks 40 - 43) (continued)



ANALYSES

1. (70M) The projected unsupportable time for DSS Maintenance is severe to extreme and moderate for MEX, and VGR1. Contention is due to over subscription in the Mars and Sun viewperiods caused by requirements supporting CAS tour simultaneous support in week 41 and 43, M01O mapping, MEX solar corona and bi-static radar, ROSE Delta-DOR support in weeks 41 and 42, VGR1 ASCAL, MAGROL, and DTR P/B in weeks 42 and 43.
2. (34BWG1) The projected unsupportable time is moderate to severe for DSS maintenance, MGS, MRO, MSGR, NHPC, ULYS, and WIND due to project near to full viewperiod overlap and the impact of the approved downtime at DSS-24.
3. (34BWG2) The projected unsupportable time for DSS Maintenance, MRO, ROSE and VGR1 routine support is moderate due to viewperiod overlap with CAS, MSGR, MGS, and VGR1, and the impact of the approved downtime at DSS-24 in weeks 40 – 42.

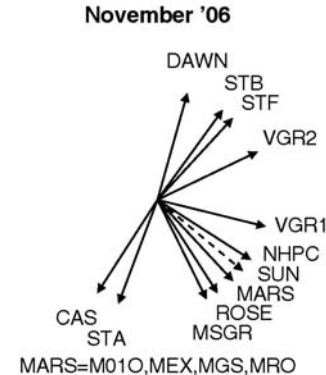
Contention levels on the 34HEF, 34HSB and 26M subnets are workable and should resolve during final schedule preparation and negotiations.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2006 – November (Weeks 44 - 48)



EVENTS

DSS-45 proposed downtime (antenna controller replacement)
beginning in week 44

Cassini tour

EVN E500 J-M4 24 hour quarterly epoch at DSS-14\63 in week 44

GBRA RA500 SOC-M4 24-hour quarterly epoch at DSS-14\63 in week 45

Mars Express R/S solar corona

Mars Reconnaissance Orbiter solar conjunction ending in week 45, DOY 310, prime science, and cruise Ka-band operations demo beginning in week 45

Rosetta (Mars gravity assist) Mars swingby

STEREO Ahead prime science

STEREO Behind prime science

Voyager 1 ASCAL and MAGROL maneuvers in week 44, DOY 304 and 307



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2006 – November (Weeks 44 - 48) (continued)

RECOMMENDATIONS

Approve DSS-45 downtime beginning in week 44.

☺ Cluster delete DSS-45 requirement for SSO and MSO array passes. (2)

Dawn change passes from 34HEF to DSS-15,65. (2)

EVN reduce E500 J-M4 support from 12 hours to 8 hours in weeks 44 – 46. (1)

GBRA reduce VLBA SOC-M4 support from 10 hours to 8 hours in week 44. (1)

M01O increase MSPA passes with MEX planned at DSS-14,63 from 2 – 3 passes per week to 4 passes per week. (1)

MEX increase MSPA passes with M01O from 2 – 3 passes per week to 4 passes per week planned at DSS-14,63. (1)

MGS move seven passes from 34HEF to DSS-15,34,65, reduce passes from 14 hours to 8 hours, and MSPA with MRO. Move the remaining two to three passes from 34BWG1 to DSS-34,34BWG2. (2)

MRO move seven 34HEF passes to DSS-15,34,65 and MSPA with MGS in weeks 45 – 48. (2)



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2006 – November (Weeks 44 - 48) (continued)



RECOMMENDATIONS (continued)

RFC move CAT M&E support from week 47 to week 44 and reduce support from 24 hours to 12 hours. (2)

SGP reduce crustal dynamics support in week 45 and 47 from 24 hours to 8 hours and delete DSS-45 support in weeks 46 and 48. (2)

☺ ULYS reduce 3 to 4 passes per week from 10 hours to 8 hours in weeks 44 – 47. (1)

☺ VGR2 move DSS-45 passes to DSS-43,34 and reduce passes from 8 hours to 6 hours. (2)



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

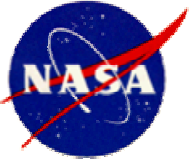
2006 – November (Weeks 44 - 48) (continued)



ANALYSES

1. (70M) Moderate unsupportable time is forecast for DSS Maintenance in weeks 44 – 47. Contention at DSS-14 and DSS-63 is due to MEX solar corona request for 10-hour passes which requires both DSS-14 and DSS-63 to satisfy their request. MEX is also in contention with EVN 12-hour array supports in weeks 44 – 46 and with GBRA VLBA 10-hour array in week 44. DSS Maintenance, M01O, and ULYS have moderate contention for time at DSS-43.
2. (34HEF) Moderate to extreme unsupportable time is forecast for weeks 44 – 48 for DSS Maintenance, MGS mapping and beta supplement, and 24-hour events for RFC CAT M&E and SGP Crustal Dynamics. Contention is due to proposed downtime for DSS-45 beginning in week 44, MGS request for seven 14-hour passes that requires two complex antennas to satisfy the 14-hour request, MRO request for 10 – 14 passes, and CAS request for DSS-65 support. MGS and MRO are also in contention with 3 periods of preventive antenna maintenance, RFC CAT M&E and SGP Crustal Dynamics 24-hour events, and VGR2 request for seven 8-hour passes at DSS-45.
3. (34BWG1) Moderate to severe unsupportable time is forecast for DSS Maintenance, MGS, MRO, MSGR, STA, STB, and VGR1 due to viewperiod overlap with DSS Maintenance and impact of the proposed downtime for DSS-45.

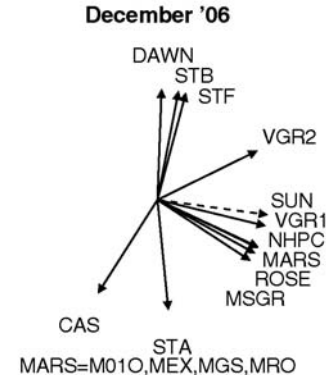
Contention levels on the 34HSB, and 26M subnets are workable and should resolve during final schedule preparation and negotiations.



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2006 – December (Weeks 49 - 52)



EVENTS

DSS-45 proposed downtime (antenna controller replacement)
ending in week 52

Cassini tour

Mars Reconnaissance Orbiter prime science and cruise Ka-band operations demo

Rosetta (Mars gravity assist) Mars swingby

STEREO Ahead prime science

STEREO Behind prime science

Voyager 2 MAGROL maneuver at DSS-43 in week 50, DOY 349



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2006 – December (Weeks 49 - 52) (continued)

RECOMMENDATIONS (continued)

Approve DSS-45 downtime.

☺ Cluster remove DSS-15 and DSS-45 from the resource request for SSO and MSO passes. (2)

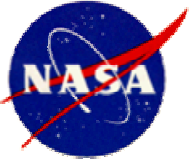
☺ DSN reduce DSS-43 antenna calibration from 8 hours to 4.5 hours. (1)

GBRA reduce week 50 M-wave spectroscopy from 9 hours to 6 hours and use DSS-14,63. Reduce new proposals from 9 hours to 4 hours and reduce planet R/AST from 9 hours to 6 hours. (1)

☺ M01O MSPA one additional 70M standalone pass per week with MGS. (1)

☺ MGS reduce one 34HEF,34BWG1,34BWG2 pass per week from 14 hours to 10 hours, move to 70M and MSPA with M01O. Reduce four 34HEF,34BWG1,34BWG2 passes in week 49, three passes in weeks 50 and 52, and five passes in week 51 from 14 hours to 8 hours and move to 70M. Reduce remaining 34HEF,34BWG1,34BWG2 passes, two in week 49, three in weeks 50 and 52, and one in week 51, from 14 hours to 8 hours, move to 34HEF, and MSPA with MRO. Delete all 4-hour passes on 34BWG1,34BWG2. (2, 3)

☺ MRO MSPA 1 to 3 passes with MGS on the 34HEF in weeks 49 – 52. Move Ka ops demo support from DSS-24,34,55 to DSS-25,34,55. (1, 2, 3)



RESOURCE ALLOCATION REVIEW BOARD

Events, Recommendations and Analyses

2006 – December (Weeks 49 - 52) (continued)



RECOMMENDATIONS (continued)

SGP delete crustal dynamics supports. (2)

☺ ULYS reduce support from 10 hours to 6 hours and use DSS-43,34. (1, 2)



RESOURCE ALLOCATION REVIEW BOARD

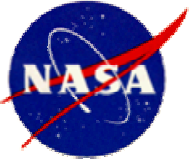
Events, Recommendations and Analyses

2006 – December (Weeks 49 - 52) (continued)

ANALYSES

1. (70M) Moderate unsupportable time is projected for DSS bearing maintenance and for VGR2 MAGROL and routine support due to viewperiod overlap with M01O mapping, MRO prime science, MEX bi-static radar.
2. (34HEF) Moderate to severe unsupportable time is forecast for DSS routine maintenance, MGS mapping and beta supplement passes, MRO prime science passes, ROSE Mars swingby passes, RFC CAT M&E and SGP crustal dynamics 24-hour events, and VGR 2 routine support. The projected unsupportable time is due to view period overlap in the Mars and Sun view; MGS mapping and beta supplement request for six to seven 14-hour supports which require two complex antennas to satisfy the requirement, MRO prime science request for fourteen 8-hour passes, and ROSE Mars swingby seven 4-hour passes, 24-hour requirements for SGP crustal dynamics and RFC CAT M&E, compounded by impact of the proposed downtime for DSS-45.
3. (34BWG1) Moderate unsupportable time is projected for DSS routine maintenance and Wind routine support due to view period overlap in the Sun and Mars view with MGS mapping and beta supplement passes, MRO Ka Ops Demo passes, and ROSE Mars swingby and impact of the proposed downtime for DSS-45.

Contention levels on the 34BWG2, 34HSB and 26M subnets are workable and should resolve during final schedule preparation and negotiations.



RESOURCE ALLOCATION REVIEW BOARD

Supplemental Materials



May be found on the RAPSO WWW Homepage at:

<http://rapweb.jpl.nasa.gov>

- ◆ **Ongoing Users Negotiated Requirements**
Individual User Loading Profiles
- ◆ **Resource Allocation Review Board Information**
Supplemental Yearly Information containing
 - Major Events Timeline
 - User Loading Profiles
 - Monthly Subnet Support Projection